







OREGON SHORT LINE RAILROAD COMPANY  
SYSTEM DIAGRAM (AB-36)

Description of Lines

Pursuant to the regulations of the Interstate Commerce Commission (49 C.F.R. 1121.21), following is a description of lines of Oregon Short Line Railroad Company as shown on the System Diagram Map.

Category 1 - Lines anticipated to be the subject of abandonment applications within three years.

Idaho

- (a) Designation of line: Ketchum Branch
  - (b) States in which located: Idaho
  - (c) Counties in which located: Blaine and Lincoln Counties
  - (d) Milepost locations: M.P. 15.65 near Richfield, to M.P. 69.84 near Ketchum
  - (e) There are no agency or terminal stations located on this line.
- 
- (a) Designation of line: East Belt Branch
  - (b) States in which located: Idaho
  - (c) Counties in which located: Fremont County
  - (d) Milepost locations: M.P. 38.56 near Newdale, to M.P. 44.28 near Belt
  - (e) Newdale at M.P. 38.08 is an agency station.
- 
- (a) Designation of line: Yellowstone Branch
  - (b) States in which located: Idaho
  - (c) Counties in which located: Fremont County
  - (d) Milepost locations: M.P. 51.0 near Ashton, to M.P. 90.7 near Big Springs
  - (e) Ashton at M.P. 50.99 is an agency station

Idaho and Montana

- (a) Designation of line: Yellowstone Branch
- (b) States in which located: Idaho and Montana
- (c) Counties in which located: Fremont County, Idaho, and Gallatin County, Montana
- (d) Milepost locations: M.P. 90.7 near Big Springs, to M.P. 107.2 near West Yellowstone
- (e) There are no agency or terminal stations located on this line.



Idaho and Nevada

- (a) Designation of line: Wells Branch
- (b) States in which located: Idaho and Nevada
- (c) Counties in which located: Twin Falls County, Idaho, and Elko County, Nevada
- (d) Milepost locations: M.P. 29.35 near Rogerson, to M.P. 123.46 near Wells.
- (e) There are no agency or terminal stations located on this line.

Category 2 - Lines which are potentially subject to abandonment and which the carrier has under study and believes may be the subject of a future abandonment application because of either anticipated operating losses or excessive rehabilitation costs, as compared to potential revenues.

Idaho

- (a) Designation of line: Ketchum Branch
  - (b) States in which located: Idaho
  - (c) Counties in which located: Lincoln County
  - (d) Milepost locations: M.P. 0.00 near Shoshone, to M.P. 15.65 near Richfield
  - (e) There are no agency or terminal stations located on this line.
- 
- (a) Designation of line: Hill City Branch
  - (b) States in which located: Idaho
  - (c) Counties in which located: Camas, Lincoln, and Blaine Counties
  - (d) Milepost locations: M.P. 0.00 near Richfield, to M.P. 58.34 near Hill City
  - (e) There are no agency or terminal stations on this line.
- 
- (a) Designation of line: New Meadows Branch
  - (b) States in which located: Idaho
  - (c) Counties in which located: Adams County
  - (d) Milepost locations: M.P. 84.52 near Rubicon, to M.P. 90.17 near New Meadows
  - (e) There are no agency or terminal stations on this line.
- 
- (a) Designation of line: Grace Branch
  - (b) States in which located: Idaho
  - (c) Counties in which located: Caribou County
  - (d) Milepost locations: M.P. 0.00 near Alexander, to M.P. 5.58 near Grace
  - (e) There are no agency or terminal stations located on this line.



- (a) Designation of line: Wells Branch
- (b) States in which located: Idaho
- (c) Counties in which located: Twin Falls County
- (d) Milepost locations: M.P. 0.00 near Twin Falls, to M.P. 29.35 near Rogerson
- (e) Twin Falls at M.P. 0.00 is an agency station.

Category 3 - Applications pending before the Interstate Commerce Commission.

Idaho

- (a) Designation of line: West Belt Branch
- (b) States in which located: Idaho
- (c) Counties in which located: Madison and Jefferson Counties
- (d) Milepost locations: M.P. 10.8 near Menan, to M.P. 26.48 near Edmonds
- (e) Menan at M.P. 10.41 is an agency station.

- (a) Designation of line: Boise Cut-Off
- (b) States in which located: Idaho
- (c) Counties in which located: Ada County
- (d) Milepost locations: M.P. 423.5 near Orchard, to M.P. 442.0 near Boise
- (e) There are no agency or terminal stations located on this line.

- (a) Designation of line: Goshen Branch
- (b) States in which located: Idaho
- (c) Counties in which located: Bingham and Bonneville Counties
- (d) Milepost locations: M.P. -0.06 near Firth, to M.P. 17.53 near Ammon
- (e) There are no agency or terminal stations located on this line.

- (a) Designation of line: Grace Branch
- (b) States in which located: Idaho
- (c) Counties in which located: Caribou County
- (d) Milepost locations: M.P. 5.58 near Grace, to M.P. 6.91 near Grace.
- (e) There are no agency or terminal stations located on this line.



## NOTICES

[AB 37 (SDM)]

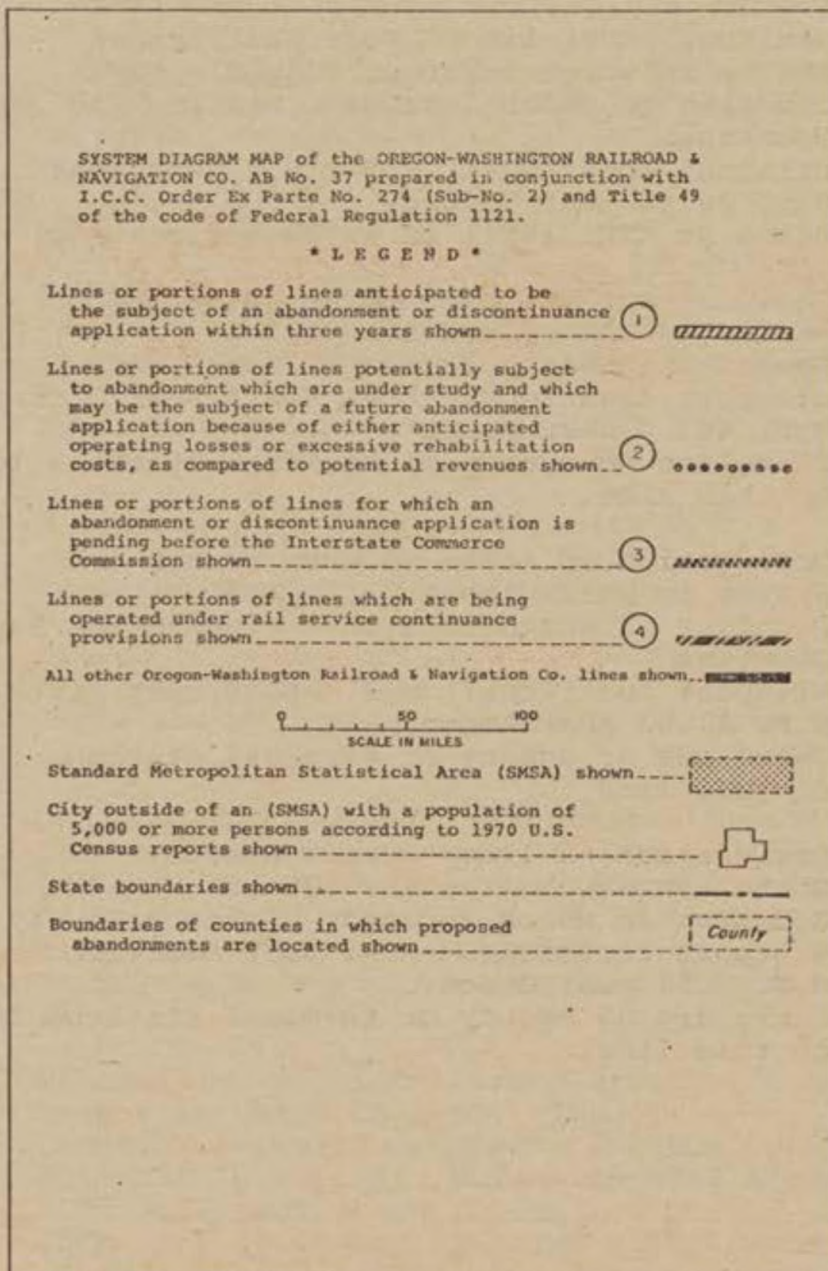
## OREGON-WASHINGTON RAILROAD &amp; NAVIGATION CO.

## System Diagram Map

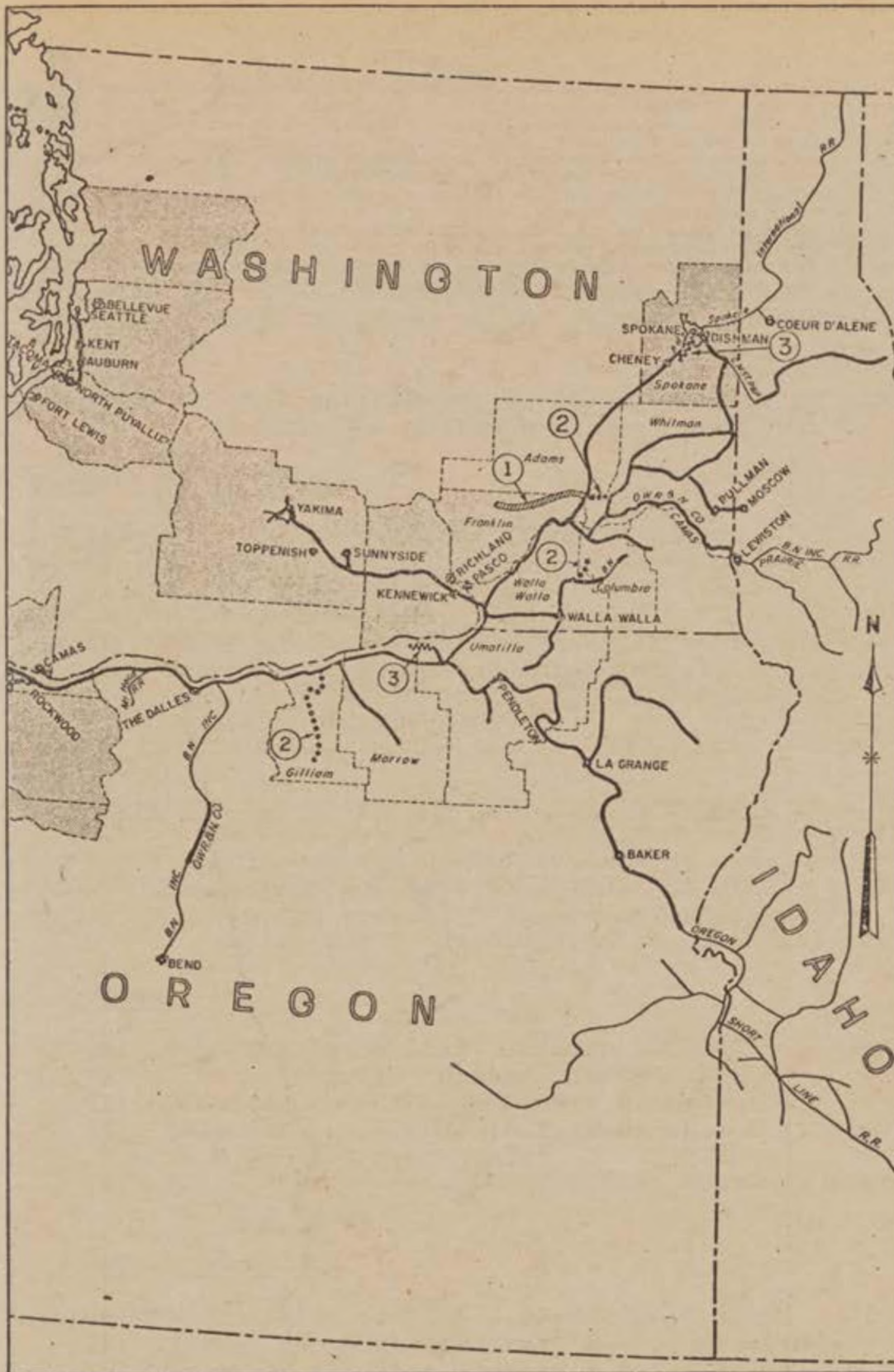
Notice is hereby given that, pursuant to the requirements contained in Title 49 of the Code of Federal Regulations, § 1121.22, that the Oregon-Washington Railroad & Navigation Co., has filed with the Commission its color-coded system diagram map in docket No. AB 37 (SDM). The maps reproduced here in black and white are reasonable reproductions of that system map and the Commission on April 29, 1977, received a certificate of publication as required by said regulation which is considered the effective date on which the system diagram map was filed.

Color-coded copies of the map have been served on the Governor of each State in which the railroad operates and the Public Service Commission or similar agency and the State designated agency. Copies of the map may also be requested from the railroad at a nominal charge. The maps also may be examined at the office of the Commission, Section of Dockets, by requesting docket No. AB 37 (SDM).

ROBERT L. OSWALD,  
Secretary.

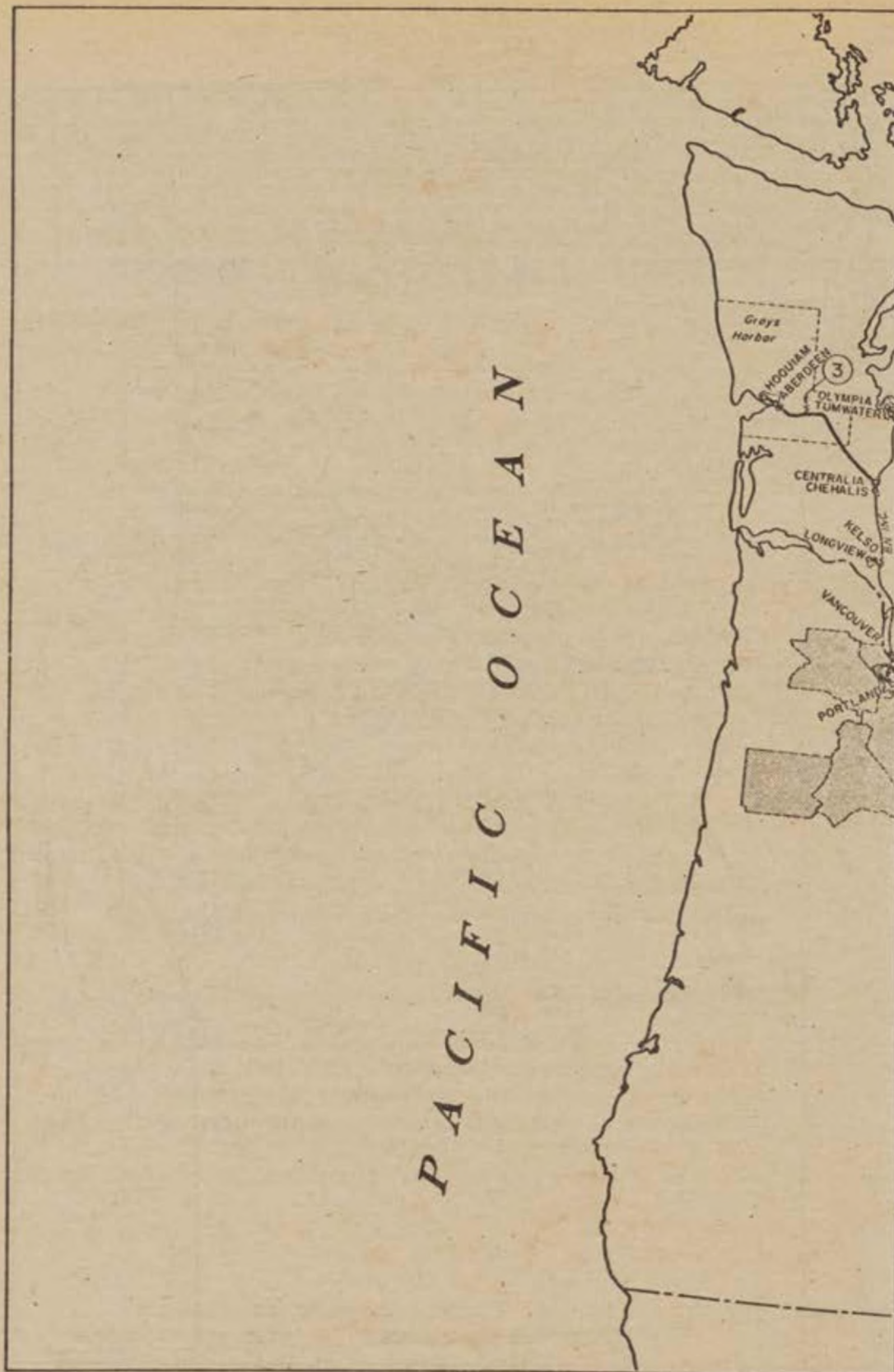








NOTICES





OREGON-WASHINGTON RAILROAD &  
NAVIGATION COMPANY  
SYSTEM DIAGRAM (AB-37)

Description of Lines

Pursuant to the regulations of the Interstate Commerce Commission (49 C.F.R. 1121.21), following is a description of lines of Oregon-Washington Railroad & Navigation Company as shown on the System Diagram Map.

Category 1 - Lines anticipated to be the subject of abandonment applications within three years.

Washington State

- (a) Designation of line: Connell Branch
- (b) States in which located: Washington State
- (c) Counties in which located: Adams and Franklin counties
- (d) Milepost locations: M.P. 15.81 near Hooper Junction to M.P. 53.06 near Connell
- (e) Connell at M.P. 52.9 is an agency station located on this line.

Category 2 - Lines which are potentially subject to abandonment which the carrier has under study and believes may be the subject of a future abandonment application because of either anticipated operating losses or excessive rehabilitation costs, as compared to potential revenues.

Oregon

- (a) Designation of line: Condon Branch
- (b) States in which located: Oregon
- (c) Counties in which located: Gilliam
- (d) Milepost locations: M.P. 0.00 near Arlington, to M.P. 44.5 near Condon
- (e) There are no agency or terminal stations located on this line.

Washington State

- (a) Designation of line: Pendleton Branch
- (b) States in which located: Washington State
- (c) Counties in which located: Walla Walla and Columbia Counties.



## NOTICES

- (d) Milepost locations: M.P. 71.3 near Bolles to M.P. 78.83 near McKay
- (e) There are no agency or terminal stations located on this line.
- (a) Designation of line: Connell Branch
- (b) States in which located: Washington State
- (c) Counties in which located: Whitman and Adams Counties
- (d) Milepost locations: M.P. 0.00 near LaCrosse to M.P. 15.81 near Hooper Junction
- (e) LaCrosse at M.P. 0.11 is an agency station located on this line.

Category 3 - Abandonment applications pending before the Interstate Commerce Commission.

Washington State

- (a) Designation of line: Hinkle-Spokane Main Line
- (b) States in which located: Washington State
- (c) Counties in which located: Spokane
- (d) Milepost locations: M.P. 354.71 near Fish Lake, to M.P. 367.19 near Spokane
- (e) There are no agency or terminal stations located on this line
- (a) Designation of line: Montesano Branch
- (b) States in which located: Washington State
- (c) Counties in which located: Grays Harbor
- (d) Milepost locations: M.P. 0.00 near Montesano, to M.P. 1.60 near South Montesano
- (e) There are no agency or terminal stations located on this line.

Oregon

- (a) Designation of line: Umatilla Branch
- (b) States in which located: Oregon
- (c) Counties in which located: Umatilla and Morrow Counties
- (d) Milepost locations: M.P. 10.1 near Umatilla, to M.P. 18.15 near Irrigon
- (e) There are no agency or terminal stations located on this line.

[FR Doc.77-14604 Filed 5-24-77;8:45 am]



NOTICES

26827

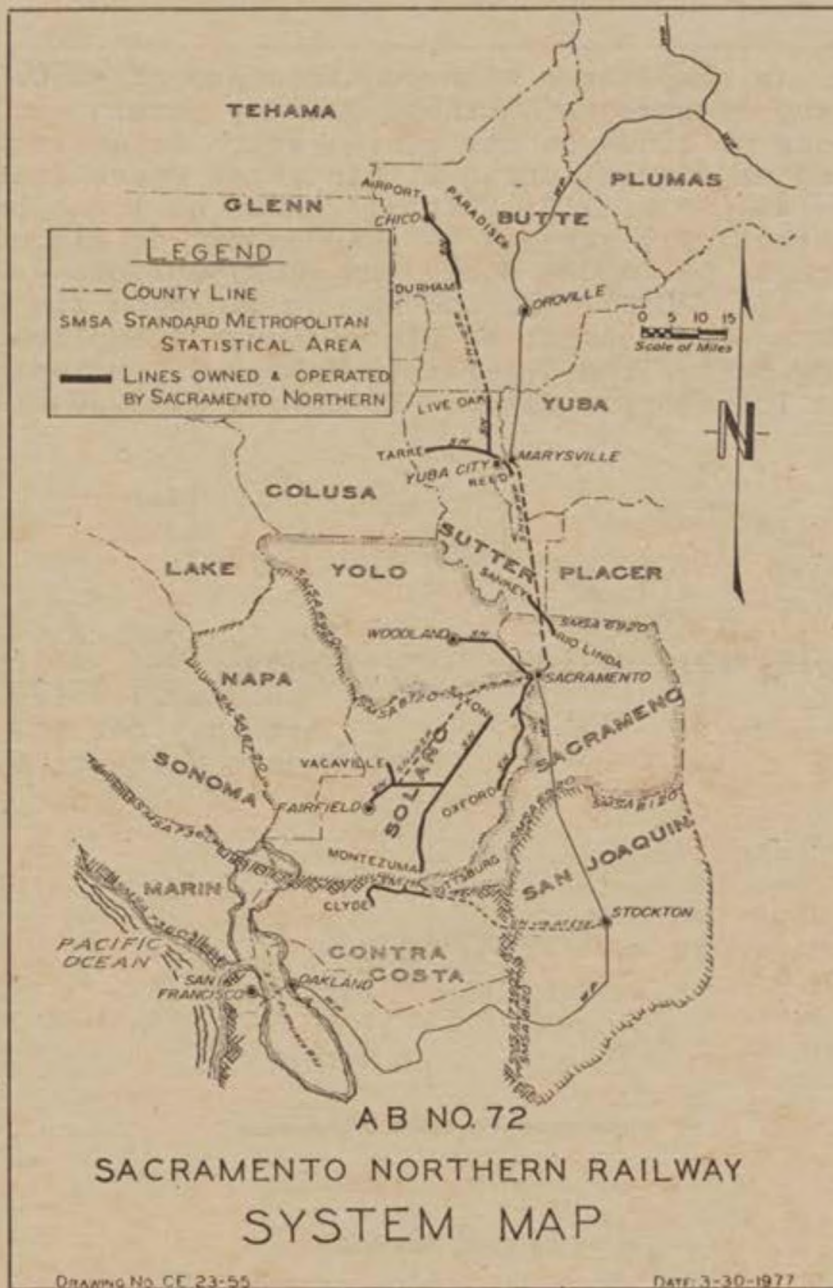
[AB 72 (SDM)]

SACRAMENTO NORTHERN RAILWAY  
System Diagram Map

Notice is hereby given that, pursuant to the requirements contained in Title 49 of the Code of Federal Regulations, § 1121.22, that the Sacramento Northern Railway Company, has filed with the Commission its color-coded system diagram map in docket No. AB 72 (SDM). The maps reproduced here in black and white are reasonable reproductions of that system map.

Color-coded copies of the map have been served on the Governor of each state in which the railroad operates and the Public Service Commission or similar agency and the State designated agency. Copies of the map may also be requested from the railroad at a nominal charge. The maps also may be examined at the office of the Commission, Section of Dockets, by requesting docket No. AB 72 (SDM).

ROBERT L. OSWALD,  
Secretary.





## NOTICES

AB-72

SACRAMENTO NORTHERN RAILWAY  
SYSTEM MAPDESCRIPTION OF LINES IN CATEGORIES 1-3  
49 C.F.R. 1121.21

In compliance with requirements of 49 C.F.R. 1121.21 the Sacramento Northern Railway herein declares that it has no lines on its system which it anticipates abandoning or discontinuing within three years [category 1 lines - 49 C.F.R. 1121.20 (b) (1)]; has no lines on its system potentially subject to abandonment or discontinuance which it has under study [category 2 lines - 49 C.F.R. 1121.20 (b) (2)]; and has no lines on its system for which an abandonment or discontinuance application is pending before the Interstate Commerce Commission on this date [category 3 lines - 49 C.F.R. 1121.20 (b) (3)].

Dated: April 22, 1977.

By Eugene J. Toler  
Eugene J. Toler  
Attorney for the  
Sacramento Northern Railway

[FR Doc.77-14609 Filed 5-24-77;8:45 am]



NOTICES

26829

[AB 57 (SDM)]

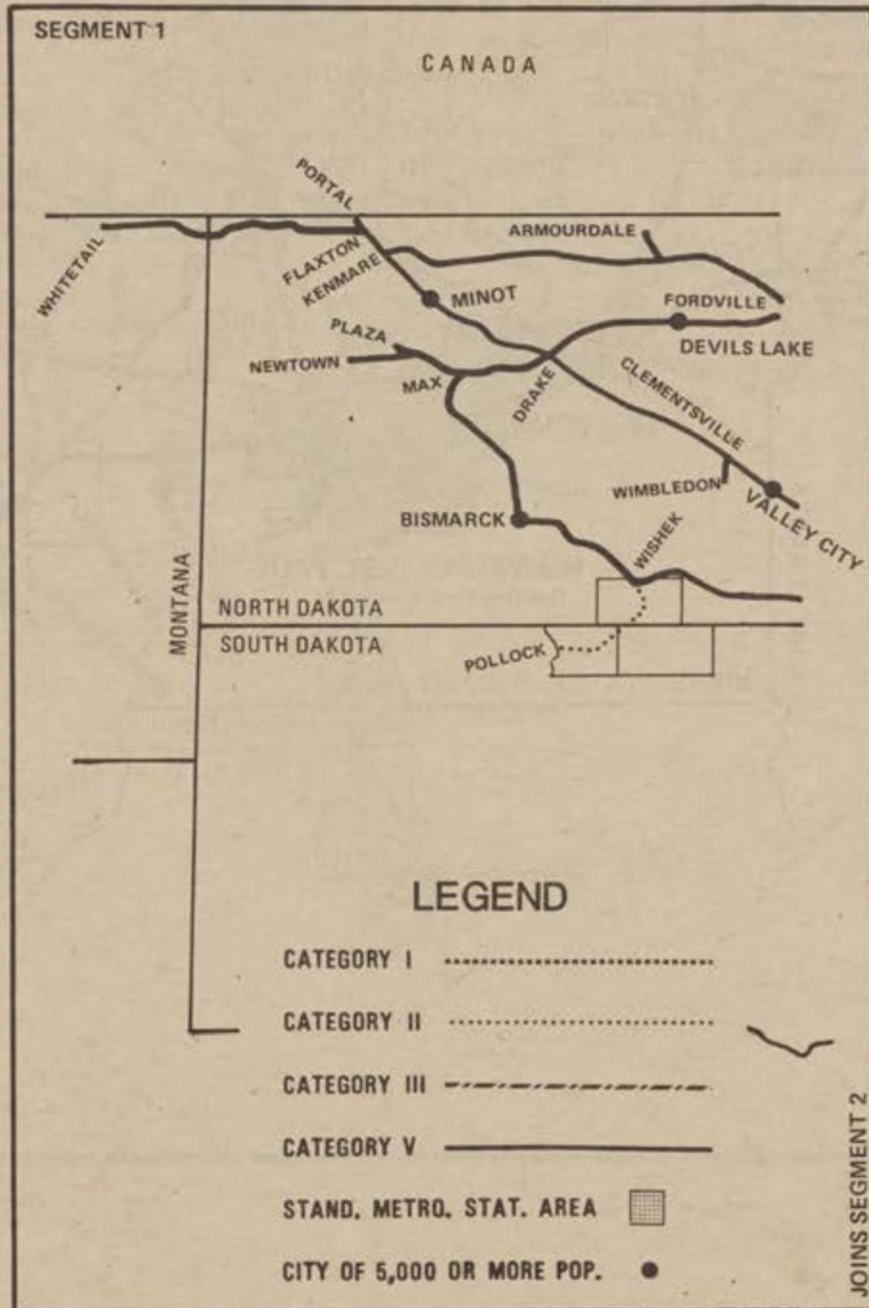
SOO LINE RAILROAD CO.

System Diagram Map

Notice is hereby given that, pursuant to the requirements contained in Title 49 of the Code of Federal Regulations, § 1121.22, that the Soo Line Railroad Company, has filed with the Commission its color-coded system diagram map in docket No. AB 57 (SDM). The maps reproduced here in black and white are reasonable reproductions of that system map and the Commission on May 2, 1977, received a certificate of publications as required by said regulation which is considered the effective date on which the system diagram map was filed.

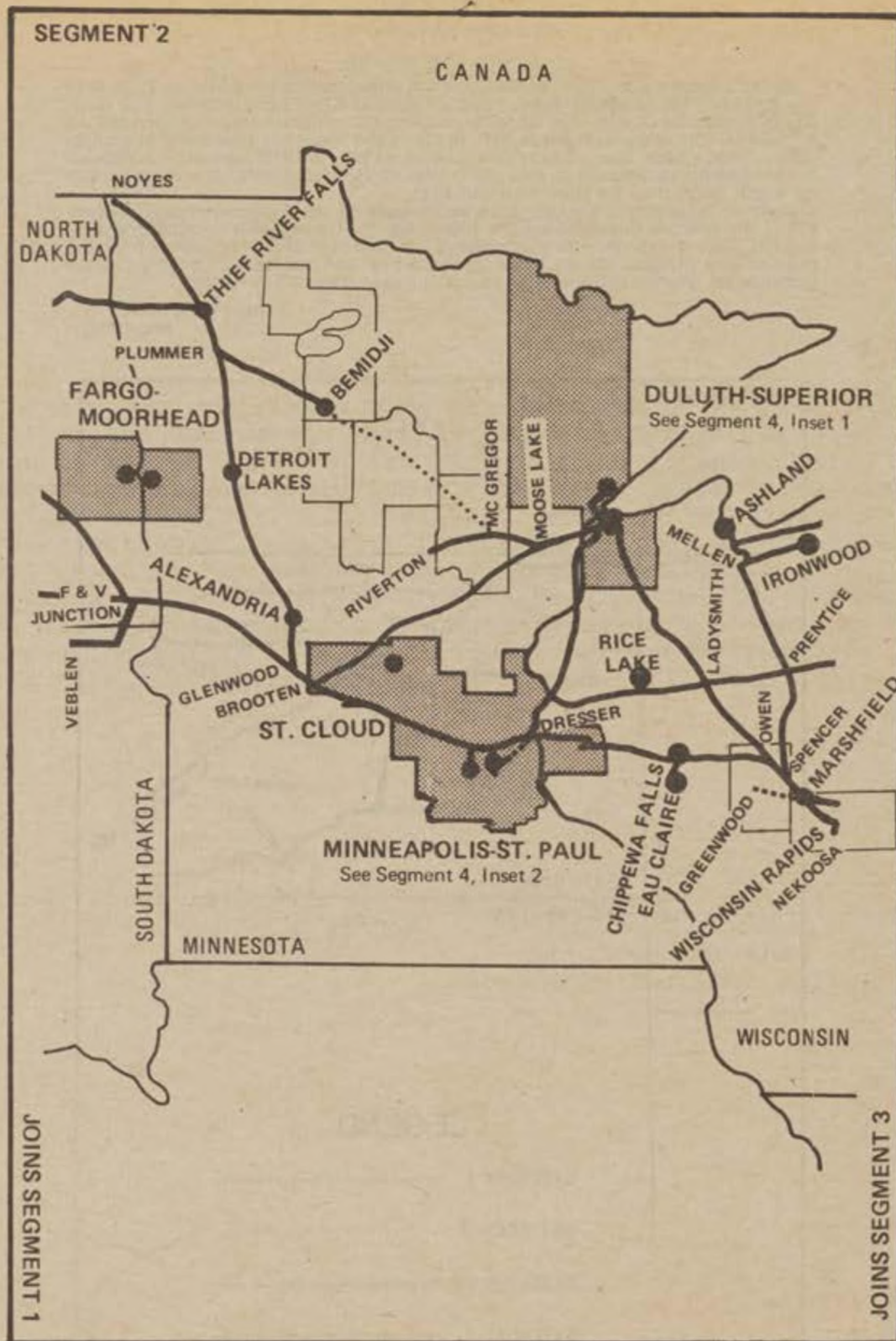
Color-coded copies of the map have been served on the Governor of each state in which the railroad operates and the Public Service Commission or similar agency and the State designated agency. Copies of the map may also be requested from the railroad at a nominal charge. The maps also may be examined at the office of the Commission, Section of Dockets, by requesting docket No. AB 57 (SDM).

ROBERT L. OSWALD,  
Secretary.

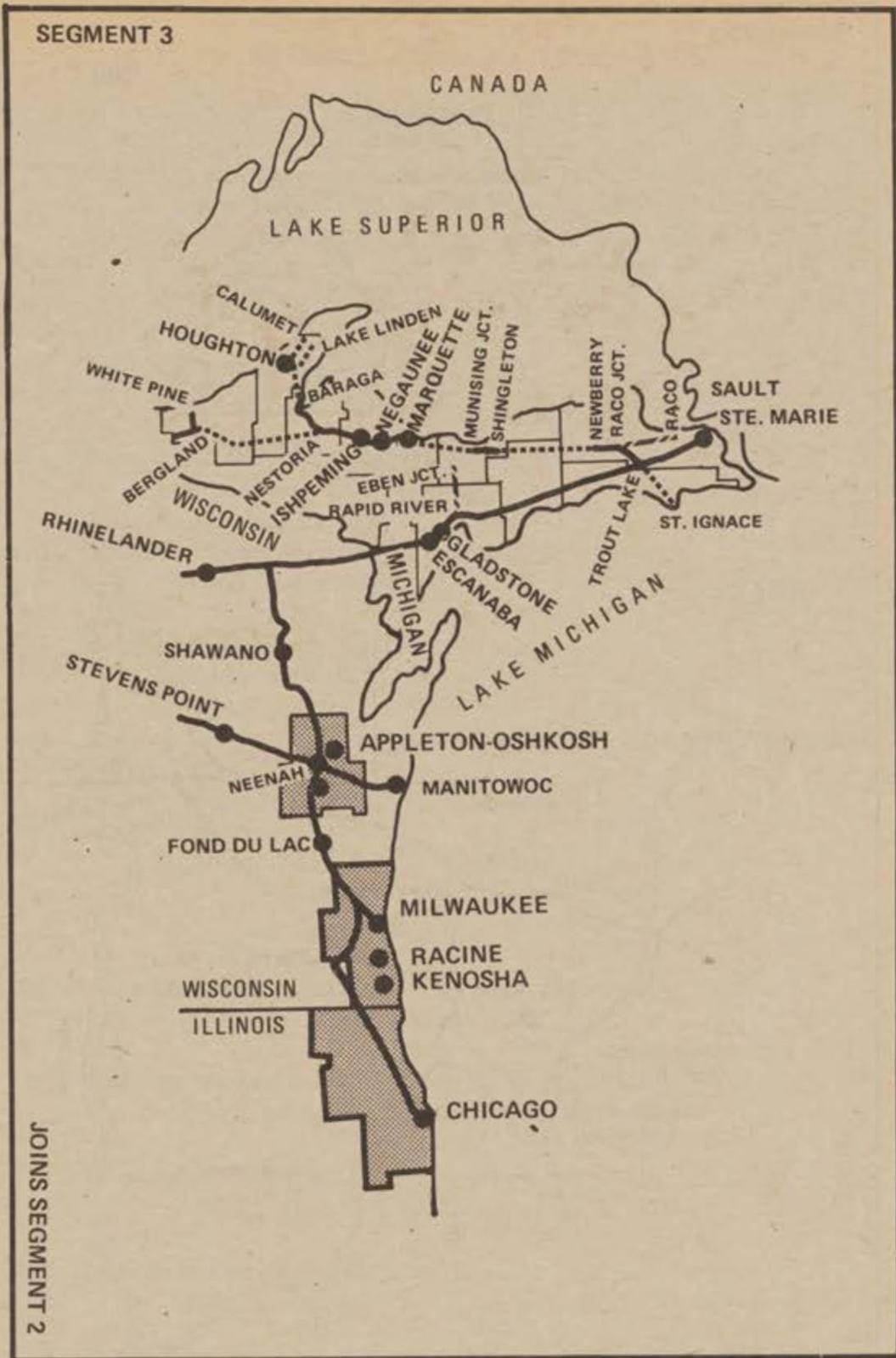




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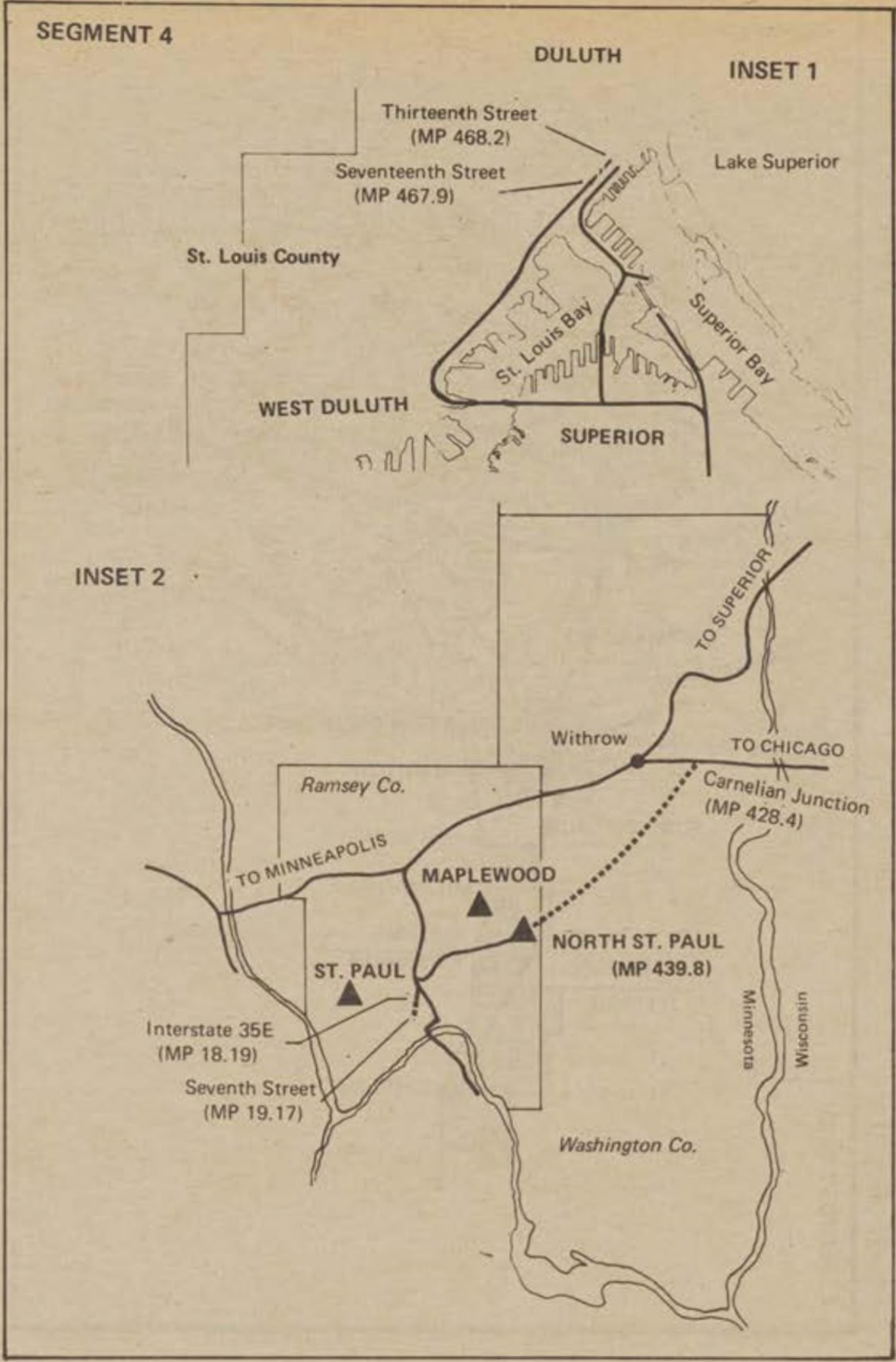








NOTICES





Descriptions of Lines to Accompany  
Soo Line Railroad Company System Diagram Map

Category I

Lines or portions of lines which the carrier anticipates will be the subject of an abandonment or discontinuance application to be filed within three years.

1. (a) Carrier's designation  
Greenwood Line
- (b) State or states in which line is located  
Wisconsin
- (c) County or counties in which line is located  
Wood and Clark
- (d) Mileposts delineating line  
281.5 to 304.1
- (e) Agency or terminal stations located on line with milepost designation

Spokeville	294.6
Loyal	297.9
Greenwood	303.5
2. (a) Carrier's designation  
North St. Paul Line
- (b) State or states in which line is located  
Minnesota
- (c) County or counties in which line is located  
Washington and Ramsey
- (d) Mileposts delineating line  
428.4 to 439.77
- (e) Agency or terminal stations located on line with milepost designation

Carnelian Jct.	428.5
Duluth Jct.	433.67



3. (a) Carrier's designation  
St. Paul
- (b) State or states in which line is located  
Minnesota
- (c) County or counties in which line is located  
Ramsey
- (d) Mileposts delineating line  
18.19 to 19.17
- (e) Agency or terminal stations located on line with milepost  
designation  
None

4. (a) Carrier's designation  
Newberry to Shingleton
- (b) State or states in which line is located  
Michigan
- (c) County or counties in which line is located  
Luce, Schoolcraft and Alger
- (d) Mileposts delineating line  
59.0 to 104.38
- (e) Agency or terminal stations located on line with milepost  
designation

McMillan	67.26
Seney	79.54
Creighton	95.10

(NOTE: Abandonment of this line will be contingent upon coordination of certain operations with other railroads to continue service west of Marquette and between Munising Junction and Shingleton. )



5. (a) Carrier's designation  
Munising Jct. to Marquette
- (b) State or states in which line is located  
Michigan
- (c) County or counties in which line is located  
Alger and Marquette
- (d) Mileposts delineating line  
116.83 to 152.50
- (e) Agency or terminal stations located on line with milepost designation
 

Ridge	119.36
AuTrain	125.03
Deerton	135.71
Siding 145	145.1

(NOTE: Abandonment of this line will be contingent upon coordination of certain operations with other railroads to continue service west of Marquette and between Munising Junction and Shingleton.)

6. (a) Carrier's designation  
St. Ignace to Trout Lake
- (b) State or states in which line is located  
Michigan
- (c) County or counties in which line is located  
Mackinac and Chippewa
- (d) Mileposts delineating line  
0 to 27.12
- (e) Agency or terminal stations located on line with milepost designation
 

St. Ignace	0.13
Moran	11.06



7. (a) Carrier's designation  
Nestoria to Bergland
- (b) State or states in which line is located  
Michigan
- (c) County or counties in which line is located  
Baraga, Houghton and Ontonagon
- (d) Mileposts delineating line  
201.68 to 268.89
- (e) Agency or terminal stations located on line with milepost designation
- |                |        |
|----------------|--------|
| Vermilac       | 211.40 |
| Covington      | 215.04 |
| Sidnaw         | 224.00 |
| Kenton         | 233.42 |
| Trout Creek    | 239.12 |
| Bruce Crossing | 250.61 |
| Ewen           | 255.34 |

(NOTE: Abandonment of this line will be contingent upon coordination of certain operations with other railroads to continue service west of Marquette, Michigan.)

8. (a) Carrier's designation  
Calumet Line (AB-57 (Sub. 5))
- (b) State or states in which line is located  
Michigan
- (c) County or counties in which line is located  
Houghton
- (d) Mileposts delineating line  
0 to 14.28
- (e) Agency or terminal stations located on line with milepost designation
- |         |       |
|---------|-------|
| Hancock | 1.72  |
| Calumet | 14.28 |



9. (a) Carrier's designation  
Lake Linden Line (AB-57 (Sub. 5))
- (b) State or states in which line is located  
Michigan
- (c) County or counties in which line is located  
Houghton
- (d) Mileposts delineating line  
0 to 9.53
- (e) Agency or terminal stations located on line with milepost designation
- |             |      |
|-------------|------|
| Dollar Bay  | 3.4  |
| Lake Linden | 9.53 |

10. (a) Carrier's designation  
Baraga to Houghton (AB-57 (Sub. 5))
- (b) State or states in which line is located  
Michigan
- (c) County or counties in which line is located  
Baraga and Houghton
- (d) Mileposts delineating line  
23.0 to 48.21
- (e) Agency or terminal stations located on line with milepost designation
- |               |       |
|---------------|-------|
| Keweenaw Bay  | 28.2  |
| Chassell      | 40.5  |
| East Houghton | 48.0  |
| Houghton      | 48.21 |



## NOTICES

Category II

Lines or portions of lines potentially subject to abandonment.

1. (a) Carrier's designation  
Plummer Line
- (b) State or states in which line is located  
Minnesota
- (c) County or counties in which line is located  
Aitkin and Cass
- (d) Mileposts delineating line  
270.26 to 369.27
- (e) Agency or terminal stations located on line with milepost designation

Palisade	281.3
Swatara	296.7
Remer	312.9
Boy River	325.6
Federal Dam	332.1
Portage Lake	339.1
Schley	344.2
Soo Jct.	345.72



2. (a) Carrier's designation  
Pollock Line
- (b) State or states in which line is located  
North Dakota and South Dakota
- (c) County or counties in which line is located  
McIntosh, N. D. and McPherson and Campbell, S. D.
- (d) Mileposts delineating line  
341.87 to 411.11
- (e) Agency or terminal stations located on line with milepost designation
- |          |       |
|----------|-------|
| Danzig   | 351.4 |
| Ashley   | 359.3 |
| Venturia | 368.2 |
| Madra    | 377.8 |
| Artas    | 383.8 |
| Herreid  | 397.1 |
| Pollock  | 409.7 |

Category III

Lines or portions of lines for which an abandonment or discontinuance application is currently pending before the Interstate Commerce Commission.

1. (a) Carrier's designation  
Duluth Trackage (AB-57 (Sub. 4))
- (b) State or states in which line is located  
Minnesota
- (c) County or counties in which line is located  
St. Louis
- (d) Mileposts delineating line  
467.93 to 468.20
- (e) Agency or terminal stations located on line with milepost designation  
None



NOTICES

2. (a) Carrier's designation  
Raco Line (AB-57 (Sub. 2))
- (b) State or states in which line is located  
Michigan
- (c) County or counties in which line is located  
Chippewa and Luce
- (d) Mileposts delineating line  
19.69 to 46.69
- (e) Agency or terminal stations located on line with milepost designation
- |          |       |
|----------|-------|
| Raco     | 20.03 |
| Rexford  | 25.18 |
| Strongs  | 31.87 |
| Eckerman | 35.25 |
| Hulbert  | 40.97 |

3. (a) Carrier's designation  
Rapid River Line (AB-57 (Sub. 1))
- (b) State or states in which line is located  
Michigan
- (c) County or counties in which line is located  
Delta and Alger
- (d) Mileposts delineating line  
348.69 to 379.23
- (e) Agency or terminal stations located on line with milepost designation
- |           |       |
|-----------|-------|
| Trenary   | 368.0 |
| Traunik   | 372.8 |
| Eben Jct. | 379.0 |

(NOTE: A final order authorizing abandonment of this line was issued by the Commission on October 13, 1976. However, that order has not been implemented.)

[FR Doc.77-14601 Filed 5-24-77; 8:45 am]



## NOTICES

26841

[AB 121 (SDM)]

## SPOKANE INTERNATIONAL RAILROAD CO.

## System Diagram Map

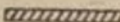
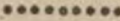
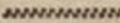




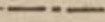
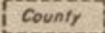
Notice is hereby given that, pursuant to the requirements contained in Title 49 of the Code of Federal Regulations, § 1121.22, that the Spokane International Railroad Company, has filed with the Commission its color-coded system diagram map in docket No. AB 121 (SDM). The maps reproduced here in black and white are reasonable reproductions of that system map and the Commission on April 29, 1977, received a certificate of publication as required by said regulation which is considered the effective date on which the system diagram map was filed.

Color-coded copies of the map have been served on the Governor of each state in which the railroad operates and the Public Service Commission or similar agency and the State designated agency. Copies of the map may also be requested from the railroad at a nominal charge. The maps also may be examined at the office of the Commission, Section of Dockets, by requesting docket No. AB 121 (SDM).

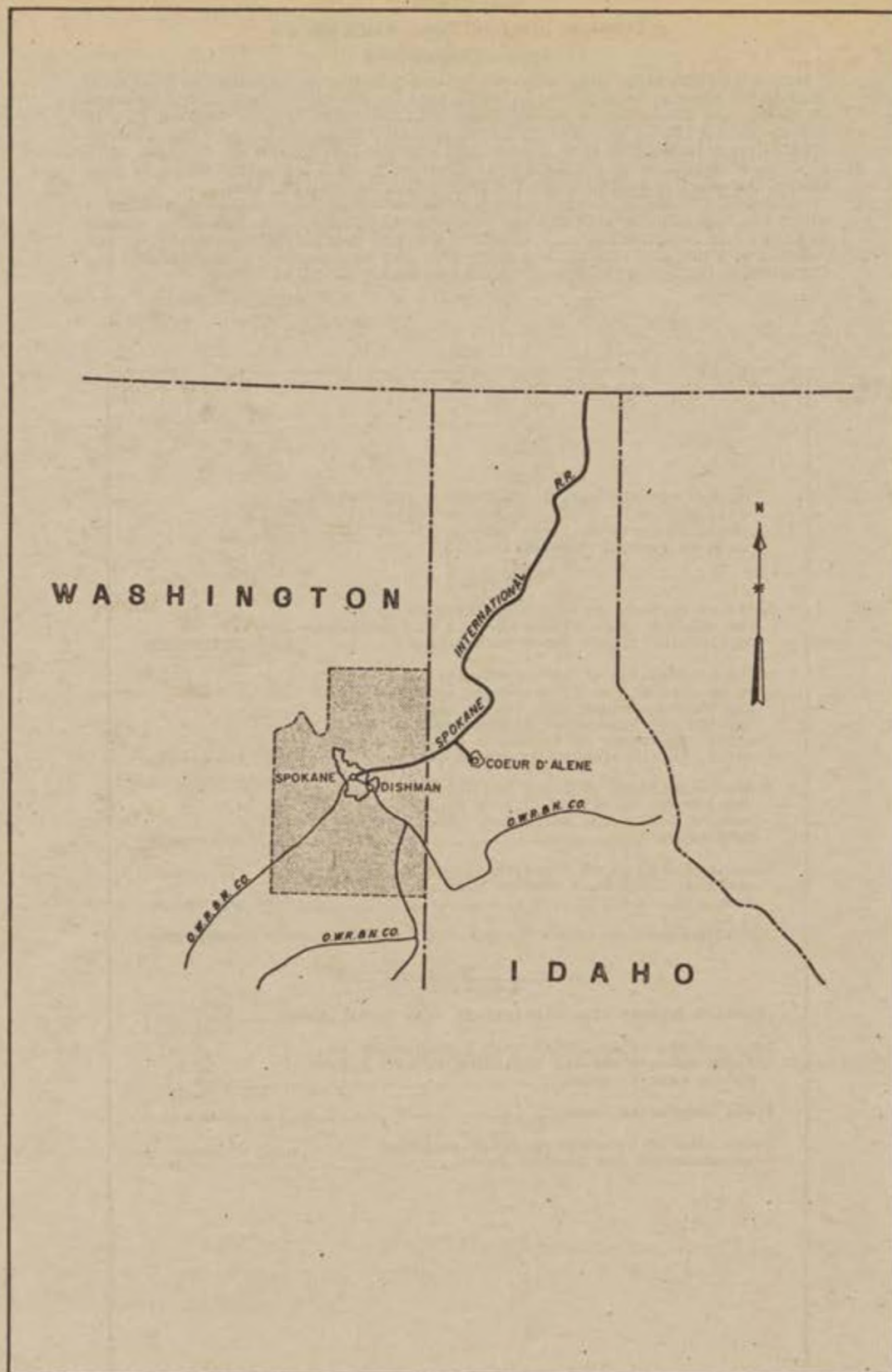
ROBERT L. OSWALD,  
Secretary.

SYSTEM DIAGRAM MAP of the SPOKANE INTERNATIONAL RAILROAD AB No. 121 prepared in conjunction with I.C.C. Order Ex Parte No. 274 (Sub-No. 2) and Title 49 of the code of Federal Regulation 1121.

## \* L E G E N D \*

- Lines or portions of lines anticipated to be the subject of an abandonment or discontinuance application within three years shown (1) 
- Lines or portions of lines potentially subject to abandonment which are under study and which may be the subject of a future abandonment application because of either anticipated operating losses or excessive rehabilitation costs, as compared to potential revenues shown (2) 
- Lines or portions of lines for which an abandonment or discontinuance application is pending before the Interstate Commerce Commission shown (3) 
- Lines or portions of lines which are being operated under rail service continuance provisions shown (4) 
- All other Spokane International Railroad lines shown 
- 0 50 100  
SCALE IN MILES
- Standard Metropolitan Statistical Area (SMSA) shown 
- City outside of an (SMSA) with a population of 5,000 or more persons according to 1970 U.S. Census reports shown 
- State boundaries shown 
- Boundaries of counties in which proposed abandonments are located shown 





[FR Doc.77-14594 Filed 5-24-77;8:45 am]



## NOTICES

26843

[AB 34 (SDM)]

## ST. JOSEPH &amp; GRAND ISLAND RAILROAD CO.

## System Diagram Map

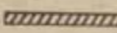

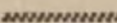





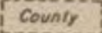
Notice is hereby given that, pursuant to the requirements contained in Title 49 of the Code of Federal Regulations, § 1121.22, that the St. Joseph & Grand Island Railroad Company, has filed with the Commission its color-coded system diagram map in docket No. AB 34 (SDM). The maps reproduced here in black and white are reasonable reproductions of that system map and the Commission on April 29, 1977, received a certificate of publication as required by said regulation which is considered the effective date on which the system diagram map was filed.

Color-coded copies of the map have been served on the Governor of each State in which the railroad operates and the Public Service Commission or similar agency and the State designated agency. Copies of the map may also be requested from the railroad at a nominal charge. The maps also may be examined at the office of the Commission, Section of Dockets, by requesting docket No. AB 34 (SDM).

ROBERT L. OSWALD,  
Secretary.

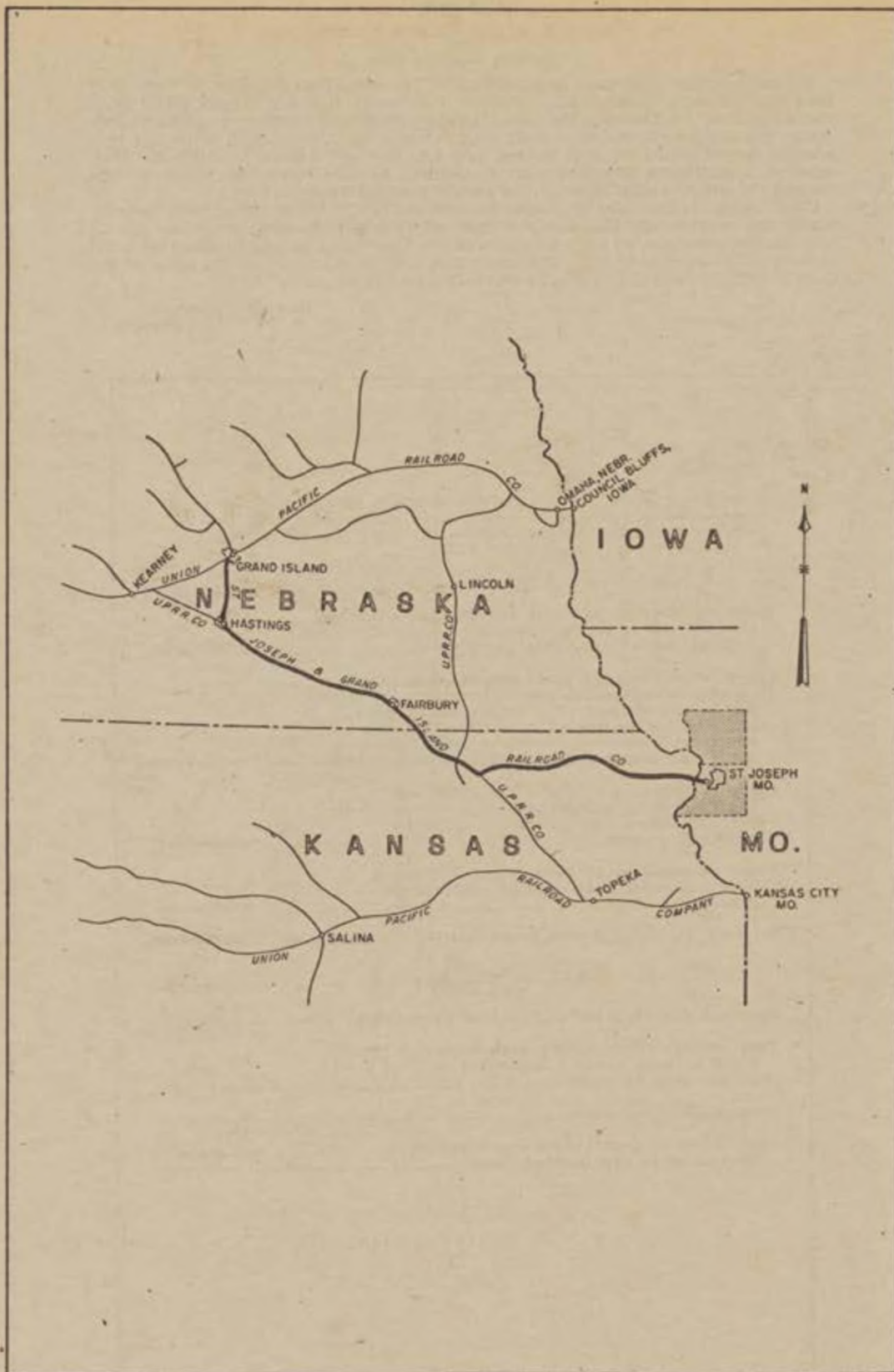
SYSTEM DIAGRAM MAP of the ST. JOSEPH & GRAND ISLAND RAILROAD CO. AB No. 34 prepared in conjunction with I.C.C. Order Ex Parte No. 274 (Sub-No. 2) and Title 49 of the code of Federal Regulation 1121.

## \* L E G E N D \*

- Lines or portions of lines anticipated to be the subject of an abandonment or discontinuance application within three years shown (1) 
- Lines or portions of lines potentially subject to abandonment which are under study and which may be the subject of a future abandonment application because of either anticipated operating losses or excessive rehabilitation costs, as compared to potential revenues shown (2) 
- Lines or portions of lines for which an abandonment or discontinuance application is pending before the Interstate Commerce Commission shown (3) 
- Lines or portions of lines which are being operated under rail service continuance provisions shown (4) 
- All other St. Joseph & Grand Island Railroad Co. lines shown 
- Standard Metropolitan Statistical Area (SMSA) shown 
- City outside of an (SMSA) with a population of 5,000 or more persons according to 1970 U.S. Census reports shown 
- State boundaries shown 
- Boundaries of counties in which proposed abandonments are located shown 

0 50 100  
SCALE IN MILES





[FR Doc.77-14593 Filed 5-24-77; 8:45 am]



## TIDEWATER SOUTHERN RAILWAY CO.

## System Diagram Map

Notice is hereby given that, pursuant to the requirements contained in Title 49 of the Code of Federal Regulations, § 1121.22, that the Tidewater Southern Railway Company, has filed with the Commission its color-coded system diagram map in docket No. AB 144 (SDM). The maps reproduced here in black and white are reasonable reproductions of that system map.

Color-coded copies of the map have been served on the Governor of each state in which the railroad operates and the Public Service Commission or similar agency and the State designated agency. Copies of the map may also be requested from the railroad at a nominal charge. The maps also may be examined at the office of the Commission, Section of Dockets, by requesting docket No. AB 144 (SDM).

ROBERT L. OSWALD,  
Secretary.





AB-144

TIDEWATER SOUTHERN RAILWAY COMPANY  
SYSTEM MAP

DESCRIPTION OF LINES IN CATEGORIES 1-3  
49 C.F.R. 1121.21

In compliance with requirements of 49 C.F.R. 1121.21 the Tidewater Southern Railway Company herein declares that it has no lines on its system which it anticipates abandoning or discontinuing within three years [category 1 lines - 49 C.F.R. 1121.20(b)(1)]; has no lines on its system potentially subject to abandonment or discontinuance which it has under study [category 2 lines - 49 C.F.R. 1121.20(b)(2)]; and has no lines on its system for which an abandonment or discontinuance application is pending before the Interstate Commerce Commission on this date [category 3 lines - 49 C.F.R. 1121.20(b)(3)].

Dated: April 22, 1977.

By Eugene J. Toler  
Eugene J. Toler  
Attorney for the  
Tidewater Southern Railway Company

[FR Doc.77-14602 Filed 5-24-77;8:45 am]



[AB 169 (SDM)]

TOLEDO, ANGOLA AND WESTERN RAILWAY CO.

System Diagram Map

Notice is hereby given that, pursuant to the requirements contained in Title 49 of the Code of Federal Regulations, § 1121.22, that the Toledo, Angola and Western Railway Company, has filed with the Commission its color-coded system diagram map in docket No. AB-169 (SDM). The maps reproduced here in black and white are reasonable reproductions of that system map and the Commission on May 16, 1977, received a certificate of publication as required by said regulation which is considered the effective date on which the system diagram map was filed.

Color-coded copies of the map have been served on the Governor of each State in which the railroad operates and the Public Service Commission or similar agency and the State designated agency. Copies of the map may also be requested from the railroad at a nominal charge. The maps also may be examined at the office of the Commission, Section of Dockets, by requesting docket No. AB-169 (SDM).

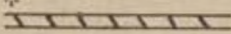


ROBERT L. OSWALD,  
Secretary.

All operations are in:

Lucas County, Ohio

Toledo, Ohio Standard Metropolitan Statistical  
Area

Legend

Lines anticipated will be subject to abandonment application within 3 years	
State Lines	
Sidetracks on the line	

Description of Lines to Accompany the System Diagram Map

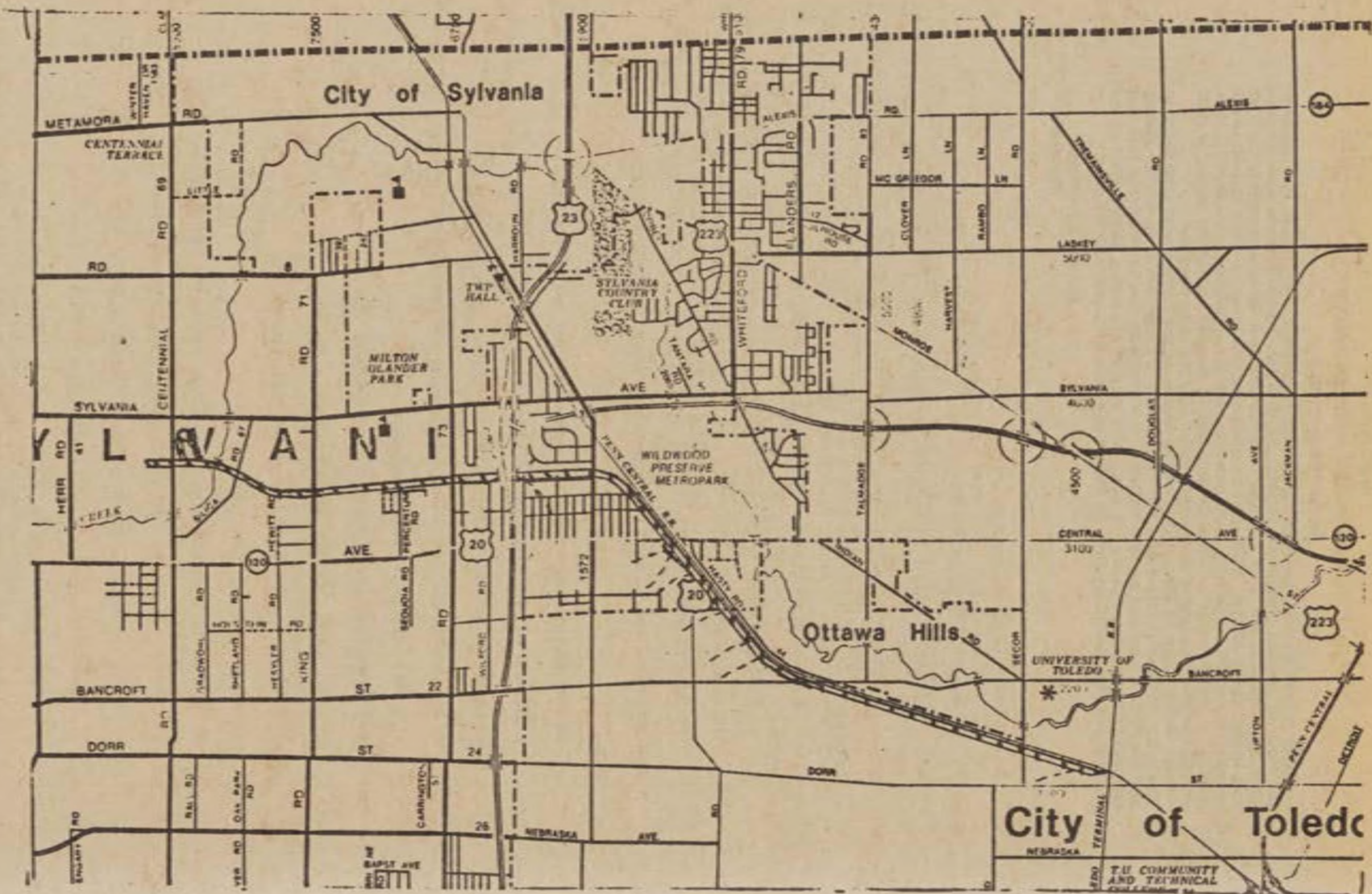
Lines which the carrier anticipates will be the subject of an abandonment or discontinuance application to be filed within three years:

- a) Covers entire line of Toledo, Angola and Western Railway Company
- b) Located wholly within State of Ohio
- c) Located wholly within Lucas County
- d) Line is 8.25 miles - no mileposts are located on the line.
- e) Terminal Stations at Vulcan (Mile 0.00), at Kuhlman No. 6 (Mile 0.25), at Langenderfer (Mile 2.60), at Entenman (Mile 3.00), at Cashway (Mile 4.00), at Lake Shore Industries (Mile 4.50), at Kuhlman No. 7 (Mile 4.75), at Texaco (Mile 5.75), and at Silica (Mile 8.25).



26848

NOTICES



[P12 Doc:77-14606 Filed 6-24-77; 8:46 am]

FEDERAL REGISTER, VOL. 42, NO. 101—WEDNESDAY, MAY 25, 1977

AR\_0033442



## NOTICES

26849

[AB 33 (SDM)]

## UNION PACIFIC RAILROAD CO.

## System Diagram Map

Notice is hereby given that, pursuant to the requirements contained in Title 49 of the Code of Federal Regulations, § 1121.22, that the Union Pacific Railroad Company, has filed with the Commission its color-coded system diagram map in docket No. AB 33 (SDM). The maps reproduced here in black and white are reasonable reproductions of that system map and the Commission on April 29, 1977, received a certificate of publication as required by said regulation which is considered the effective date on which the system diagram map was filed.

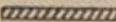

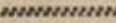




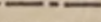
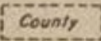
Color-coded copies of the map have been served on the Governor of each state in which the railroad operates and the Public Service Commission or similar agency and the State designated agency. Copies of the map may also be requested from the railroad at a nominal charge. The maps also may be examined at the office of the Commission, Section of Dockets, by requesting docket No. AB 33 (SDM).

ROBERT L. OSWALD,  
Secretary.

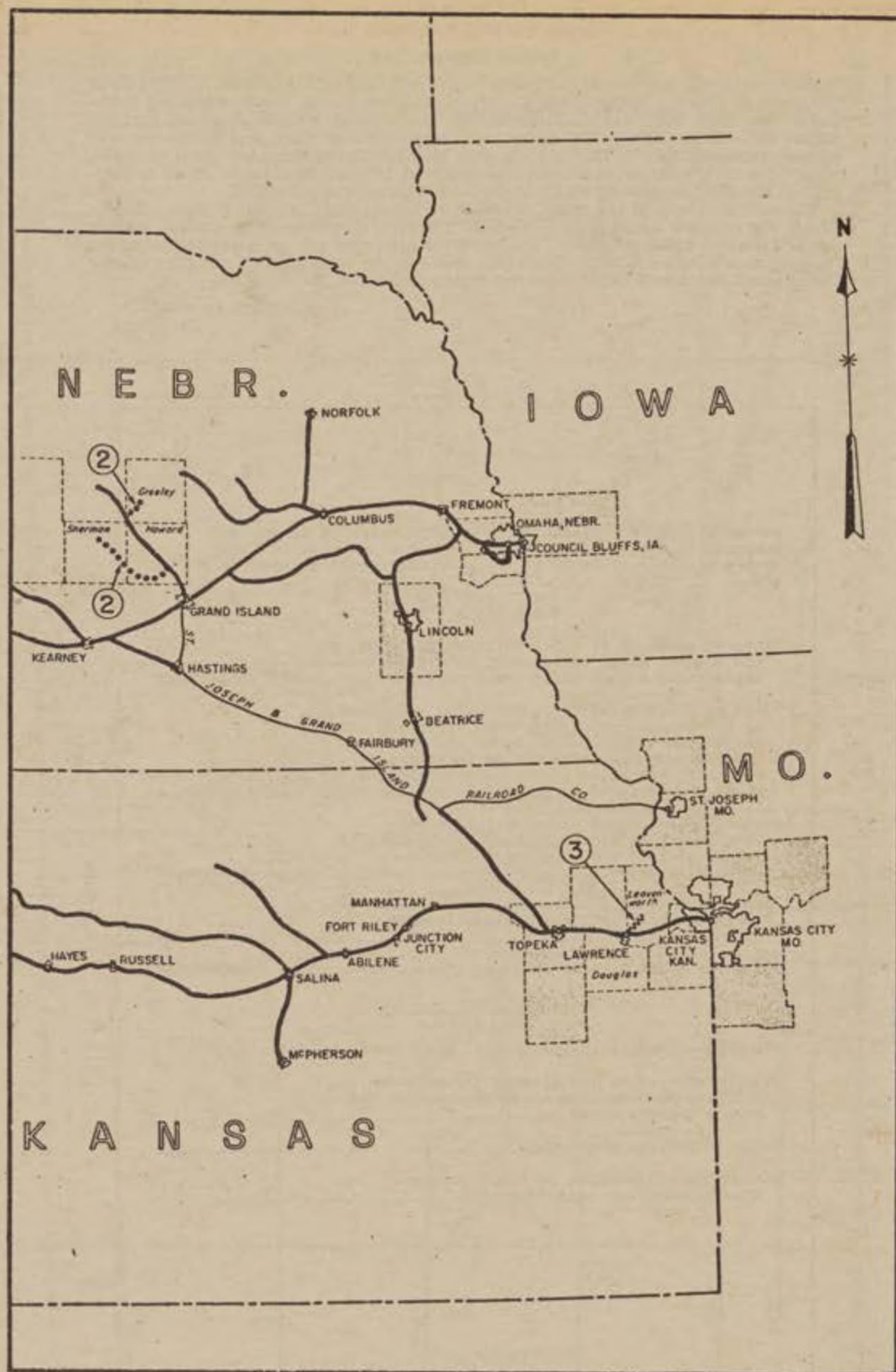
AB 33 (SDM)

SYSTEM DIAGRAM MAP of the UNION PACIFIC RAILROAD AB No. 33 prepared in conjunction with I.C.C. Order Ex Parte No. 274 (Sub-No. 2) and Title 49 of the code of Federal Regulation 1121.

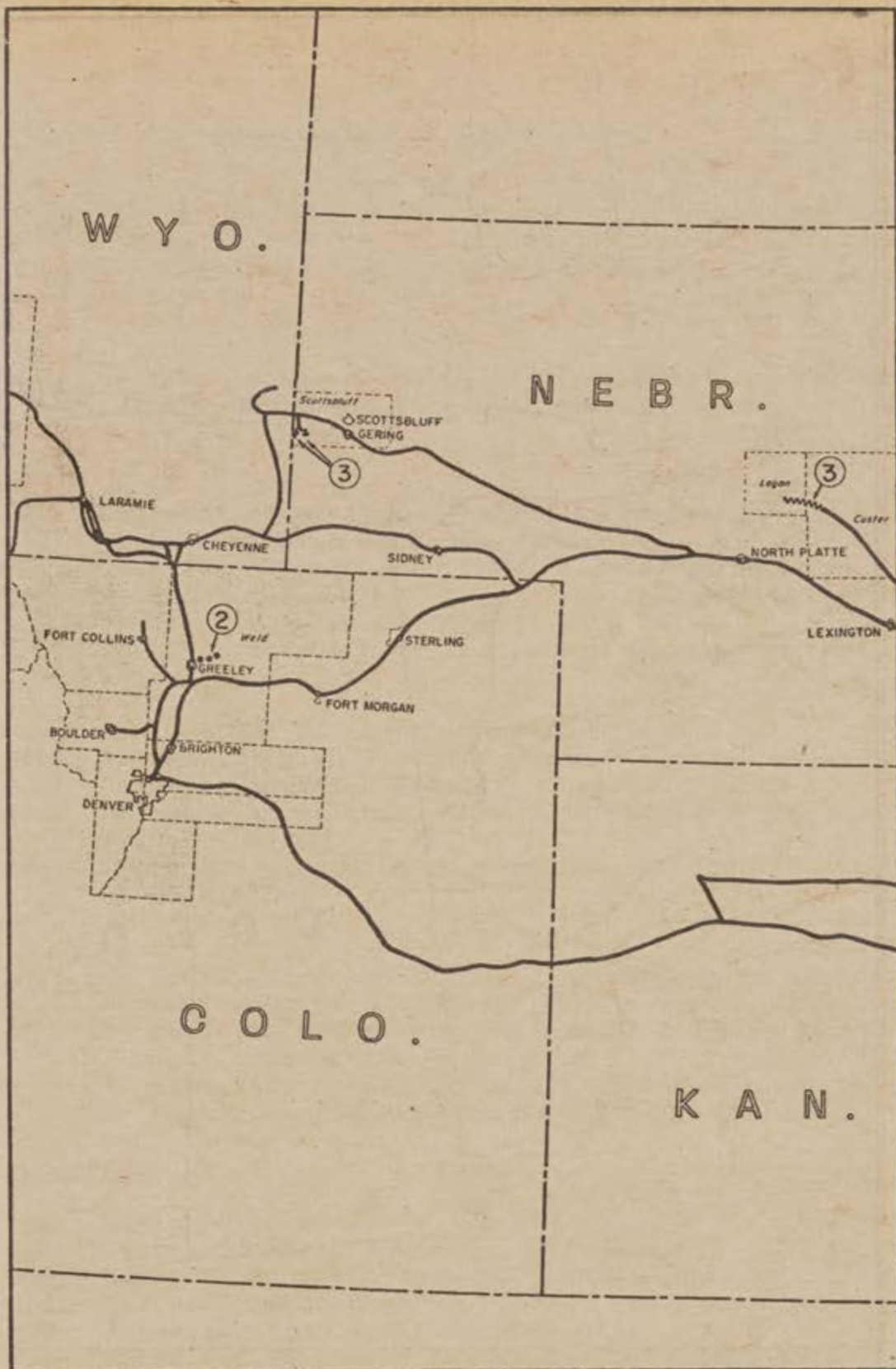
## \* L E G E N D \*

- Lines or portions of lines anticipated to be the subject of an abandonment or discontinuance application within three years shown----- (1) 
- Lines or portions of lines potentially subject to abandonment which are under study and which may be the subject of a future abandonment application because of either anticipated operating losses or excessive rehabilitation costs, as compared to potential revenues shown--- (2) 
- Lines or portions of lines for which an abandonment or discontinuance application is pending before the Interstate Commerce Commission shown----- (3) 
- Lines or portions of lines which are being operated under rail service continuance provisions shown----- (4) 
- All other Union Pacific Railroad Company lines shown--- 
- 0 50 100  
SCALE IN MILES
- Standard Metropolitan Statistical Area (SMSA) shown--- 
- City outside of an (SMSA) with a population of 5,000 or more persons according to 1970 U.S. Census reports shown----- 
- State boundaries shown----- 
- Boundaries of counties in which proposed abandonments are located shown----- 



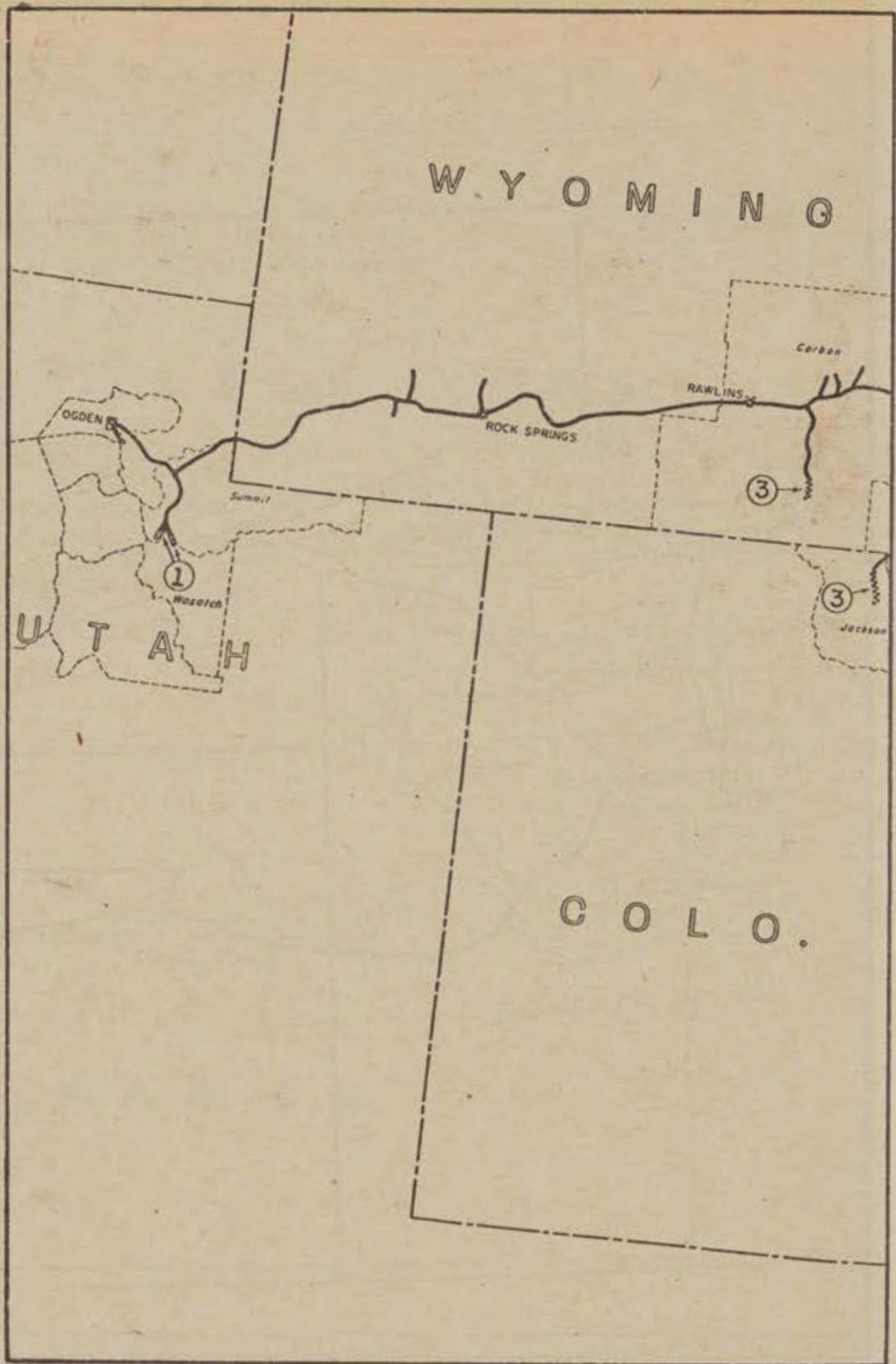








NOTICES





UNION PACIFIC RAILROAD COMPANY  
SYSTEM DIAGRAM (AB-33)

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Description of Lines

Pursuant to the regulations of the Interstate Commerce Commission (49 C.F.R. 1121.21), following is a description of lines of Union Pacific Railroad Company as shown on the System Diagram Map.

Category 1 - Lines anticipated to be the subject of abandonment applications within three years.

Utah

- (a) Designation of line: Park City Branch
  - (b) States in which located: Utah
  - (c) Counties in which located: Summit County
  - (d) Milepost locations: M.P. 27.39 near Freight Yard Junction to M.P. 28.43 near Park City
  - (e) The Park City Agency Station is located on this line at M.P. 28.41.
- 
- (a) Designation of line: Ontario Branch
  - (b) States in which located: Utah
  - (c) Counties in which located: Wasatch County
  - (d) Milepost locations: M.P. 2.45 at Keetley, to M.P. 5.43
  - (e) There are no agency or terminal stations located on this line.

Category 2 - Lines which are potentially subject to abandonment and which the carrier has under study and believes may be the subject of a future abandonment application because of either anticipated operating losses or excessive rehabilitation costs, as compared to potential revenues.

Colorado

- (a) Designation of line: Greeley Branch
- (b) States in which located: Colorado
- (c) Counties in which located: Weld County
- (d) Milepost locations: M.P. 0.00 near Greeley Junction, to M.P. 10.86 near Gill
- (e) There are no agency or terminal stations located on this line.



Nebraska

- (a) Designation of line: Loup City Branch
  - (b) States in which located: Nebraska
  - (c) Counties in which located: Sherman and Howard Counties
  - (d) Milepost locations: M.P. 0.20 near St. Paul, to M.P. 39.60 near Loup City
  - (e) There are no agency or terminal stations located on this line.
- 
- (a) Designation of line: Scotia Branch
  - (b) States in which located: Nebraska
  - (c) Counties in which located: Greeley County
  - (d) Milepost locations: M.P. 44.57 near Scotia Junction, to M.P. 45.94 near Scotia
  - (e) There are no agency or terminal stations located on this line.

Category 3 - Applications pending before the Interstate Commerce Commission.

Nebraska

- (a) Designation of line: Kearney Branch
  - (b) States in which located: Nebraska
  - (c) Counties in which located: Custer and Logan Counties
  - (d) Milepost locations: M.P. 83.11 at Arnold, to M.P. 102.47 at Stapleton
  - (e) There are no agency or terminal stations located on this line.
- 
- (a) Designation of line: Lyman Branch
  - (b) States in which located: Nebraska
  - (c) Counties in which located: Scotts Bluff County
  - (d) Milepost locations: M.P. 5.0 near Hartman, to M.P. 6.4 at Stegall
  - (e) There are no agency or terminal stations located on this line.
- 
- (a) Designation of line: Sears Branch
  - (b) States in which located: Nebraska
  - (c) Counties in which located: Scotts Bluff County
  - (d) Milepost locations: M.P. 0.00 near Sears, to M.P. 2.8 near Janise
  - (e) There are no agency or terminal stations located on this line.



Kansas

- (a) Designation of line: Leavenworth Branch
- (b) States in which located: Kansas
- (c) Counties in which located: Leavenworth and Douglas Counties
- (d) Milepost locations: M.P. 20.72 near Tonganoxie, to M.P. 34.49 near Lawrence
- (e) Lawrence at M.P. 34.34 is an agency station.

Colorado

- (a) Designation of line: Coalmont Branch
- (b) States in which located: Colorado
- (c) Counties in which located: Jackson County
- (d) Milepost locations: M.P. 93.0 near Walden, to M.P. 108.0 near Hebron
- (e) Walden at M.P. 92.21 is an agency station.

Wyoming

- (a) Designation of line: Encampment Branch
- (b) States in which located: Wyoming
- (c) Counties in which located: Carbon County
- (d) Milepost locations: M.P. 24.29 near Saratoga, to 33.40 near Cow Creek
- (e) Saratoga at M.P. 24.02 is an agency station.

[FR Doc.77-14590 Filed 5-24-77;8:45 am]



## NOTICES

[AB 131 (SDM)]

## YAKIMA VALLEY TRANSPORTATION CO.

## System Diagram Map

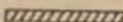

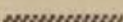

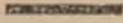


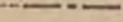
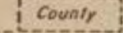
Notice is hereby given that, pursuant to the requirements contained in Title 49 of the Code of Federal Regulations, § 1121.22, that the Yakima Valley Transportation Company, has filed with the Commission its color-coded system diagram map in docket No. AB 131 (SDM). The maps reproduced here in black and white are reasonable reproductions of that system map and the Commission on April 29, 1977, received a certificate of publication as required by said regulation which is considered the effective date on which the system diagram map was filed.

Color-coded copies of the map have been served on the Governor of each State in which the railroad operates and the Public Service Commission or similar agency and the State designated agency. Copies of the map may also be requested from the railroad at a nominal charge. The maps also may be examined at the office of the Commission, Section of Dockets, by requesting docket No. AB 131 (SDM).

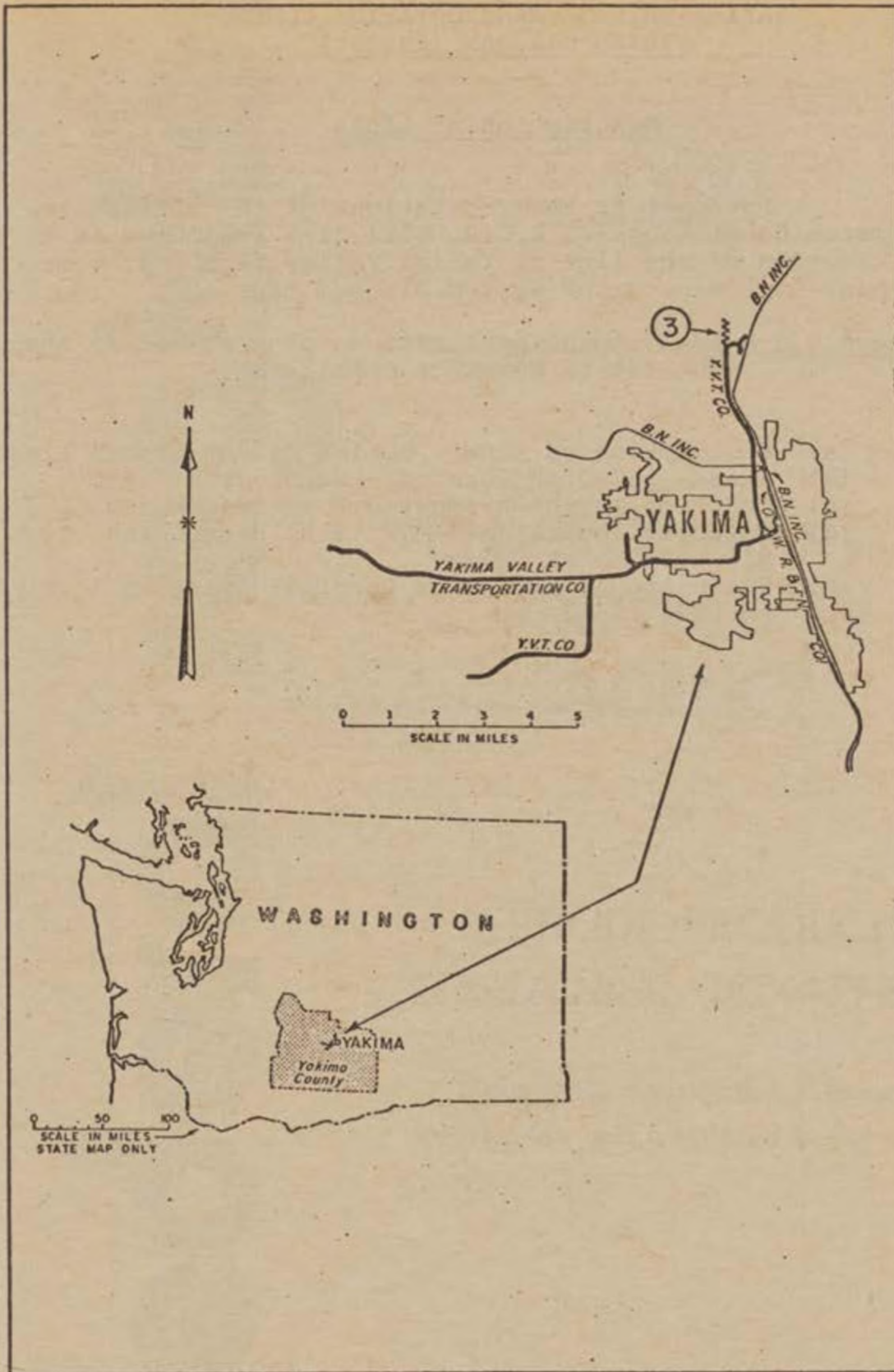
ROBERT L. OSWALD,  
Secretary.

SYSTEM DIAGRAM MAP of the YAKIMA VALLEY TRANSPORTATION CO. AB No. 131 prepared in conjunction with I.C.C. Order Ex Parte No. 274 (Sub-No. 2) and Title 49 of the code of Federal Regulation 1121.

## \* L E G E N D \*

- Lines or portions of lines anticipated to be the subject of an abandonment or discontinuance application within three years shown-----① 
- Lines or portions of lines potentially subject to abandonment which are under study and which may be the subject of a future abandonment application because of either anticipated operating losses or excessive rehabilitation costs, as compared to potential revenues shown-----② 
- Lines or portions of lines for which an abandonment or discontinuance application is pending before the Interstate Commerce Commission shown-----③ 
- Lines or portions of lines which are being operated under rail service continuance provisions shown-----④ 
- All other Yakima Valley Transportation Company lines shown-----
- Standard Metropolitan Statistical Area (SMSA) shown-----
- City outside of an (SMSA) with a population of 5,000 or more persons according to 1970 U.S. Census reports shown-----
- State boundaries shown-----
- Boundaries of counties in which proposed abandonments are located shown-----







## NOTICES

YAKIMA VALLEY TRANSPORTATION COMPANY  
SYSTEM DIAGRAM (AB-131)

Description of Lines

Pursuant to the regulations of the Interstate Commerce Commission (49 C.F.R. 1121.21), following is a description of the line of Yakima Valley Transportation Company as shown on the System Diagram Map.

Category 3 - Abandonment applications pending before the Interstate Commerce Commission.

- (a) Designation of line: Yakima Valley Branch Line
- (b) States in which located: Washington State
- (c) Counties in which located: Yakima County
- (d) Milepost locations: M.P. 3.01 near Selah, to M.P. 3.47 near Selah
- (e) There are no agency or terminal stations located on this line.

[FR Doc.77-14592 Filed 5-24-77;8:45 am]



WEDNESDAY, MAY 25, 1977

PART IV



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# ENVIRONMENTAL PROTECTION AGENCY

■

## PESTICIDE PRODUCTS CONTAINING TOXAPHENE

Rebuttable Presumption Against  
Registration and Continued Registration

Registered  
Federal  
Proper



## ENVIRONMENTAL PROTECTION AGENCY

[OPP-30000/13; FRL 731-2]

### PESTICIDE PROGRAMS

#### Rebuttable Presumption Against Registration and Continued Registration of Pesticide Products Containing Toxaphene

The Deputy Assistant Administrator, Office of Pesticide Programs, Environmental Protection Agency (EPA), has determined that a rebuttable presumption exists against registration and continued registration of all pesticide products containing toxaphene.<sup>1</sup>

#### I. REGULATORY PROVISIONS

##### A. GENERAL

EPA promulgated regulations (40 CFR 162) for the registration, reregistration, and classification of pesticides on July 3, 1975 (40 FR 28242). Section 162.11 of the regulations provides that a rebuttable presumption against registration shall arise if it is determined that a pesticide meets or exceeds any of the criteria for risk set forth in § 162.11(a)(3). If it is determined that such a presumption against continued registration of a pesticide has arisen, the regulations require that the registrant be notified by certified mail and that the registrant be provided with an opportunity to submit evidence in rebuttal of the presumption. In addition, the Agency has determined that the public should be provided with notice of the presumption in order to solicit comments from interested parties and obtain any additional information relevant to the presumption.

A notice of rebuttable presumption against registration or continued registration of a pesticide is not to be confused with a notice of intent to cancel the registration of a pesticide, and may or may not lead to cancellation. The notice of rebuttable presumption is issued when the evidence related to risk meets the Agency's criteria. The notice of intent to cancel is issued only after the risks and benefits of a pesticide are carefully considered and it is determined that the pesticide may generally cause unreasonable adverse effects to the environment.

Accordingly, all registrants and applicants for registration are invited pursuant to 40 CFR 162.11(a)(4) to submit evidence in rebuttal of the presumptions listed in Part II of this notice and, in the case of oncogenicity, to submit informa-

tion which relates to the assessment of oncogenic risks as set forth in a FEDERAL REGISTER notice concerning the Agency's Interim Procedures and Guidelines for Health Risk and Economic Impact Assessment of Suspected Carcinogens (41 FR 21402). Registrants and other interested parties may submit data on benefits which they believe would justify registration or continued registration in the event that the Agency determines that the risk presumptions have not been completely rebutted. In addition, any registrant may petition the Agency to voluntarily cancel any current registration pursuant to Section 6(a)(1) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended (86 Stat. 973, 89 Stat. 751, 7 U.S.C. 136 et seq.).

This notice of rebuttable presumption against toxaphene also describes scientific studies which suggest that toxaphene may adversely affect or cause mutagenesis, endocrine effects, enzymatic effects, reproductive effects, and population reductions in avian species including the rare and endangered species, the Brown Pelican. The Agency is soliciting information and comment on these questions, but is not now presuming against toxaphene on the basis of these studies.

##### B. REBUTTAL CRITERIA

Section 162.11(a)(4) provides that a registrant seeking continued registration may rebut the presumption by sustaining the burden of proving:

(1) In the case of a pesticide presumed against pursuant to the acute toxicity criteria of § 162.11(a)(3)(i) or pursuant to the lack of emergency treatment criteria of § 162.11(a)(3)(iii), "that when considered with the formulation, packaging, method of use, and proposed restrictions on the directions for use and widespread and commonly recognized practices of use, the anticipated exposure to an applicator or user and to local, regional, or national populations of non-target organisms is not likely to result in any significant acute adverse effects";

(2) In the case of a pesticide presumed against pursuant to the chronic toxicity criteria of § 162.11(a)(3)(ii), "that when considered with proposed restrictions on use and widespread and commonly recognized practices of use, the pesticide will not concentrate, persist or accrue to levels in man or the environment likely to result in any significant chronic adverse effects"; or

(3) In either case, that "the determination by the Agency that the pesticide meets or exceeds any of the criteria for risk was in error."

##### C. BENEFITS INFORMATION

In addition to submitting evidence to rebut the presumption of risk, § 162.11(a)(5)(iii) provides that a registrant "may submit evidence as to whether the economic, social and environmental benefits of the use of the pesticide subject to the presumption outweigh the risk of use." If the risk presumptions are not rebutted, the benefit evidence submitted by

the registrant<sup>2</sup> and any preliminary EPA staff recommendations may be considered by the Administrator in determining the appropriate regulatory action. Specifically § 162.11(a)(5)(iii) provides that if the "benefits appear to outweigh risks," the Administrator may issue a notice of intent to hold a hearing pursuant to section 6(b)(2) of FIFRA rather than a notice of intent to cancel or deny registration pursuant to section 6(b)(1) of FIFRA. Alternatively, if the "benefits do not appear to outweigh the risks," the Administrator shall issue a notice pursuant to section 3(c)(6) or section 6(b)(1) of the Act, as appropriate." Moreover, if at any time the Administrator determines that a pesticide poses an "imminent hazard" to humans or the environment, a notice of suspension may be issued pursuant to section 6(c) of the Act.

#### II. PRESUMPTIONS

40 CFR 162.11(a)(3) provides that a rebuttable presumption shall arise if a pesticide's ingredient(s), metabolite(s) or degradation product(s) meet or exceed (i) acute toxicity risk criteria relating to hazards to humans, domestic animals, or wildlife, or (ii) chronic toxicity risk criteria relating to oncogenic, mutagenic, and delayed toxic effects in man and/or test animals, or relating to population reductions in nontarget organisms or fatality to members of endangered species.

The preamble to the document which promulgated 40 CFR Part 162 (FR 28262) discussed those pesticide's which meet or exceed the acute toxicity criteria of § 162.11(a)(3)(i)(B) and stated they must be closely scrutinized to determine if the hazard which the pesticide's acute toxicity presents to these life forms necessitates restrictions on use or denial or cancellation of the registrations.

##### A. RISK CRITERIA—HAZARD TO WILDLIFE: AQUATIC ORGANISMS

Section 162.11(a)(3)(i)(B)(3) provides that a rebuttable presumption shall

<sup>2</sup>Registrants or other interested persons who desire to submit benefit information should consider submitting information on the following subjects, along with any other relevant information they desire to submit:

1. Identification of the major uses of the pesticide, including estimated quantities used by crop or other application.
2. Identification of the minor uses of the pesticide, including estimated quantities used by category such as lawn and garden uses and household uses.
3. Identification of registered alternative products for the uses set forth in (1) and (2) above, including an estimate of their availability.
4. Determination of the change in costs to the user of providing equivalent pesticide treatment with any available substitute products.
5. Assessment of regulation impact upon user productivity (e.g., yield per acre and/or total output) from using available substitute pesticides or from using no other pesticides.
6. If the impacts upon either user costs or productivity are significant, a qualitative assessment of the regulation's impact on production of major agricultural commodities and retail food prices of such commodities.

<sup>1</sup>A position document prepared by the Agency Working Group on toxaphene is available for public inspection in the Office of Special Pesticide Reviews (WH-598), Office of Pesticide Programs, Environmental Protection Agency, East Tower, Room 447, 401 M Street SW., Washington, D.C. 20460. This position document contains an appendix of references, background information, and other material pertinent to the issuance of this notice of rebuttable presumption. The supporting materials contained in the position document are referenced in this notice where appropriate.



arise against a pesticide use if it "(r)esults in a maximum calculated concentration following direct application to a 6-inch layer of water more than 1/2 the acute LC<sub>50</sub> for aquatic organisms representative of the organisms likely to be exposed as measured on test animals specified in the Registration Guidelines."<sup>2</sup> Data reviewed during the assessment of hazards, as a result of the use of toxaphene products, indicate that resulting water concentrations from the use on rice and cranberries do exceed the level, 1/2 the acute LC<sub>50</sub> for representative fresh water fish and crustacean species as set forth in this section (Sanders, H. O. 1969. Bur. Sport Fish. Wildl. Tech. Papers #25; Sanders & Cope. 1966. Trans. Am. Fish. Soc. 95 #2; Macek & McAllister 1970. Trans. Am. Fish. Soc. 99#1).

Organisms	Species	LC <sub>50</sub> value*
Water flea or Daphnia	( <i>Daphnia pulex</i> ).....	15 p/b (48 hr).
Largemouth bass	( <i>Micropterus salmoides</i> ).....	2 p/b (48 hr).
Rainbow trout	( <i>Salmo gairdneri</i> ).....	4 p/b (48 hr).
Scud	( <i>Gammarus locustria</i> ).....	26 p/b (96 hr).
Channel catfish	( <i>Ictalurus punctatus</i> ).....	13 p/b (96 hr).
Bluegill sunfish	( <i>Lepomis macrochirus</i> ).....	18 p/b (96 hr).

The above LC<sub>50</sub> values were used as determinative values to confirm whether toxaphene products applied to a fresh water environment met or exceeded the criteria for rebuttable presumption. Calculations based on representative label rates indicate that the lowest recommended dosage for use on either rice or cranberries results in a 6-inch layer of water concentration of 1104 ppb (1.104 ppm).

Since a great deal of rice is grown in coastal areas where it is released into estuarine or marine environments, it was decided to examine LC<sub>50</sub> values for representative aquatic organisms that would be exposed to effluent from rice field drainages (Schimmel et al. EPA contribution #268. Prepub. Copy).

Organism	Species	LC <sub>50</sub> (96 hr)
Pink shrimp	( <i>Penaeus duorarum</i> ).....	1.4 p/b.
Gray shrimp	( <i>Palaeomonetes pugio</i> ).....	4.4 p/b.
Sheepshead minnow	( <i>Cyprinodon variegatus</i> ).....	1.1 p/b.
Pinfish	( <i>Lagodon rhomboides</i> ).....	0.5 p/b.

Bearing in mind the calculated values for the resulting water concentration of toxaphene, 1104 ppb (1.104 ppm), when applied to cranberries and/or rice at the lowest recommended dosage of 2 pounds per acre, it is clear that the criteria of § 162.11(a) (3) (i) (B) (3) are exceeded.

#### B. CHRONIC TOXICITY

(1) *Oncogenic effects in test animals.* 40 CFR 162.11(a) (3) (ii) (A) provides, "A rebuttable presumption shall arise if a pesticide's ingredient(s) \* \* \* (induces) oncogenic effects in experimental mammalian species or in man as a result of

oral, inhalation or dermal exposure \* \* \*." As a further clarification of the provision, the preamble to the Interim Guidelines states that "a substance will be considered a presumptive cancer risk when it causes a statistically significant excess incidence of benign or malignant tumors in humans or animals."

A limited number of truly "oncogenic" studies were found in the literature. The most recent, a study by the National Cancer Institute of the National Institutes of Health (1976. Experimental Design Status Report: Carcinogenesis bioassay), reveals that a significant increase in the incidence of cancerous growths did in fact develop in male and female mice fed toxaphene for a period of 1 year, 10 months. An increase in tumors in female rats was also seen. Dr. Melvin Reuber, a specialist in the field of carcinogenesis, also stated that toxaphene "may be tumorigenic in male rats." Several other long-term feeding studies to rats and other test animals suggest that histological changes did occur in various organs of the animals tested, principally the liver.

(2) *Other chronic and/or delayed toxic effects.* To assess the true effects of pesticides to man and the environment, it has been customary to use common yet sensitive organisms as test subjects in various registration testing protocols. In this manner it is possible to learn of hazards or other harmful effects resulting from pesticide exposure. Some of these organisms serve as indicators of possible effects that can and sometimes do occur in higher life forms. In other instances they provide a means of extrapolating noted effects to man.

Regardless of how the noted effects are interpreted or used, they are true indicators of a change from the norm which can be harmful or even fatal to the life forms tested and should be heeded.

40 CFR 162.11(a) (3) (ii) (B) provides that "A rebuttable presumption shall arise if a pesticide's ingredient(s) \* \* \* [p]roduces any other chronic or delayed toxic effect in test animals \* \* \*."

In three tests by Merhle and Mayer, fathead minnows, brook trout, and channel catfish have been used in various registration testing protocols. These same fish species, when exposed to nanogram levels of toxaphene, gave evidence of serious changes in collagen and calcium levels in their bone structure. These changes were serious enough to cause backbones to fracture with slight electrical stimulation (Undated. Bone development & growth of fish as affected by toxaphene. Prepub. Copy; 1975. J. Fish Res. Bd. Can. 32#5, 2 articles).

Although not followed to the same end result, tests by Chernoff and Carver on rats gave indications of certain ossification centers (sternal and caudal) that failed to develop in the fetal stages (1976. Bull. Environ. Contam. Tox. 15#6). Recent work done on black ducks by Finley and Ludke has indicated significant decreases in collagen levels and increases in calcium levels in the sternal areas of young ducks (1976. USDI Prog Rpt. Study Plan P-D-508-15).

#### C. POPULATION REDUCTION IN NONTARGET ORGANISMS

Many of the above changes, as well as changes in normal animal behavior patterns, result in reduced survivability of the animal species affected; in some instances, the ultimate results were serious kills or "reductions in natural populations." Agency Pesticide Episode Reports (PERS) data show that toxaphene has been the known causative agent in 94 fish kills since 1966. There are indications in the literature that it has played a major part in many others.

#### III. OTHER ADVERSE EFFECTS WITH RESPECT TO WHICH THE AGENCY SEEKS ADDITIONAL INFORMATION

A review of the scientific literature suggests several other adverse effects that may be caused by toxaphene, which are listed and discussed briefly below. The Agency is not presuming against toxaphene based upon these effects at this time. However, the Agency Working Group will continue to investigate these effects and may issue a supplementary Position Document discussing them in greater detail. If appropriate, the Agency will presume against toxaphene based upon these effects. The Agency requests comments on the information listed below, and requests submission of any additional studies or relevant information on toxaphene related adverse effects, including but not limited to mutagenesis, endocrine effects, reproductive effects, enzymatic effects, population reductions in nontarget organisms, and fatalities in endangered species. The studies referenced below are available for public inspection in the Office of Special Pesticide Reviews (WH-566), Office of Pesticide Programs, Environmental Protection Agency, East Tower, Room 446, 401 M Street SW., Washington, D.C. 20460.

##### A. CHRONIC EFFECTS: MUTAGENESIS

40 CFR 162.11(a) (3) (ii) (A) provides that a rebuttable presumption shall arise, "if a pesticide's ingredient(s) \* \* \* [i]nduces mutagenic effects, as determined by multitest evidence."

A study by Samosh, examined during the course of review, revealed some chromosomal damage to peripheral leukocytes in Russian women workers exposed to polychlorocamphene and two other halogenated chlorocamphene compounds used as insecticides (1974. Cytol. Gen. 8(1):24-27).

##### B. OTHER CHRONIC OR DELAYED TOXIC EFFECTS

(1) *Endocrine effects.* 40 CFR § 162.11(a) (3) (ii) (B) provides that a rebuttable presumption shall arise, "if a pesticide's ingredient(s) \* \* \* [p]roduces any other chronic or delayed toxic effect \* \* \*."

One such "other chronic" effect was noted in bobwhite quail treated with toxaphene. It stimulated thyroid growth and iodine uptake. It also caused adrenal hypertrophy (Hurst et al. 1974. Poultry Sci. 53:125-133).

Another study by Makovskaya et al. related changes that took place in the

\*The Guidelines for Registering Pesticides in the United States appeared in the FEDERAL REGISTER June 25, 1975 (40 FR 26802).



endocrine glands of mice, rats, and rabbits after prolonged low-level exposure to toxaphene. It produced changes in the adrenals, in the island cells of the pancreas, and in the seminiferous epithelium of the testes. It also caused hyperfunction in the thyroid and atrophic changes in the hypophysis (1971. *Med. Prac.* 2:128-131).

Another Russian study also related changes that occurred in workers exposed to polychlorocamphene, the Russian equivalent of toxaphene (Blekherman & Il'ina. Undated. All-Union Sci Res. Inst. of Hyg. & Tox. of Pesticides, Polymers, and Plastics).

(2) *Reproductive effects.* A fish study by Mayer et al., using extremely low levels (ppt) of toxaphene to treat brook trout, resulted in reduced egg viability. Those that did hatch had reduced survivability (1975. *Ecol. Res. Series*, EPA 600/3-75-013).

A study by Samosh relates changes in the menstrual cycle and estrogen metabolism in female agricultural workers exposed to several halogenated organochlorines, one of which was polychlorocamphene (1974. *Cytol. Gen.* 8(1):24-27).

A third study by Welch et al. discusses the effect of toxaphene on rats relative to utilization of esterase and reduced uterotrophic activity (1971. *Tox. App. Pharm.* 19:234-246).

(3) *Enzymatic effects.* A study by Desai and Koch, using channel catfish tissues as the test medium and toxaphene as the test chemical, resulted in significant changes in several enzyme systems (1975. *Bull. Environ. Contam. Tox.* 13#2).

Yet another study on rats by Kuz'minskaya and Alekhina using toxaphene as the test compound resulted in reduction in overall lactate dehydrogenase activity in the liver and serum (1976. *Environ. Health Rpt.* 13:127-132).

(4) *Population reduction in nontarget organisms.* 40 CFR 162.11(a)(3)(ii)(C) provides that a rebuttable presumption shall arise, "if a pesticide's ingredient(s) \* \* \* can reasonably be anticipated to result in significant local, regional, or national population reductions in nontarget organisms, or fatality to members of endangered species."

Large kills of waterfowl have occurred in California, Arizona, South Dakota, and Texas. Other associated shore birds and fish-eating birds were also found dead in large numbers. In all, significant levels of toxaphene were found in the adipose tissue and in many of the body organs. These kills included white pelicans, cattle egrets, blackcapped night herons, greater blue herons, and various duck species. In a recent episode in Louisiana, dead and dying Brown Pelicans, a rare and endangered species,

were found. When chemical analysis was completed significant residues of toxaphene were found (Hunt and Keith, 1963. *Univ. of Calif.*; Johnson, 1966. *S. D. Bird Notes*, 18#3; Memo from J. Keith, dated 10-28-76).

Several other studies related reductions in populations of various bird species following the spraying or treating of short-grass ranges with toxaphene for the control of grasshoppers and range caterpillars (McEwen et al. 1972. *J. Range Mgmt.* 25#3; Memo: Kuntzelman to Files, 1976).

#### IV. REGISTRATION AND PRODUCTS SUBJECT TO THE NOTICE

All registrants and applicants for registration listed below are being notified by certified mail of the rebuttable presumption existing against registration and continued registration of their products.

The registrants and applicants for registration shall have 45 days from the date this notice is sent or until July 15, 1977 to submit evidence in rebuttal of the presumption. However, the Administrator may, for good cause shown, grant an additional 60 days during which such evidence may be submitted. Notice of such an extension, if granted, will appear in the FEDERAL REGISTER.

#### V. DUTY TO SUBMIT INFORMATION ON ADVERSE EFFECTS

Registrants are required by law to submit to EPA any additional information regarding any adverse effects on man or the environment which comes to a registrant's attention at any time, pursuant to section 6(a)(2) of FIFRA and 40 CFR 162.8(d). If any registrant of toxaphene has any published or unpublished information, studies, reports, analyses, or reanalyses regarding any adverse effect in animal species or humans, residues and claimed or verified accidents to humans, domestic animals, or wildlife which have not been previously submitted to EPA, the material must be submitted immediately. At the time each registrant responds to this notice, each registrant shall submit a written certification to the Agency that all information regarding any adverse effects known to the registrant has been submitted. In addition the registrants should notify EPA of any studies currently in progress, including the purpose of the study, the protocol, the approximate completion date, and summary of all results observed to date.

#### VI. PUBLIC COMMENTS

A Position Document, dated April 19, 1977, prepared by an Agency Working Group on toxaphene and containing background information and copies of

references to published studies and Agency reports is available for public inspection. During the time allowed for submission of rebuttal evidence, comments on the presumptions set forth in the notice and on the material contained in the Position Document are also solicited from the public. In particular, any documented episodes of adverse effects to humans, domestic animals, or wildlife, and information as to any laboratory studies in progress or completed, are requested to be submitted to EPA as soon as possible. Likewise any studies or comments on the benefits from the use of toxaphene are requested to be submitted.

All comments and information should be sent to the Federal Register Section, Technical Services Division (WH-569), Office of Pesticide Programs, EPA, Rm. 401, East Tower, 401 M Street SW., Washington, D.C. 20460. Three copies of the comments or information should be submitted if possible to facilitate the work of the Agency and others interested in inspecting them. The comments and information should bear the identifying notation "OPP-30000/13." Comments and information received within the specified time limit shall be considered before it is determined whether a notice shall be issued in accordance with 40 CFR 162.11(a)(5)(ii).

Comments received after the specified time period will be considered only to the extent feasible, consistent with the time limits imposed by 40 CFR 162.11(a)(5)(ii). All written comments and information filed pursuant to the notice will be available for public inspection in the office of the Federal Register Section from 8:30 a.m. to 4 p.m. during normal working days. The Position Document is available from the Office of Special Pesticide Reviews (OSPR), Office of Pesticide Programs (WH-566), Environmental Protection Agency, Rm. 447, East Tower, during the same time period. Specific questions with regard to this notice should be directed to the OSPR (Acting) Project Manager for Toxaphene, Mr. Frederick Hageman, at the above office address or at 202-755-5755.

Your cooperation is solicited in identifying any errors or omissions which may have been made in the following computer listings. Corrections to the listings may not necessarily be published in the FEDERAL REGISTER, but rather handled by mail with affected parties. Omissions will be corrected by notice in the FEDERAL REGISTER.

Dated: May 12, 1977.

EDWIN L. JOHNSON,  
Deputy Assistant Administrator  
for Pesticide Programs.



## NOTICES

26863

(00239)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000239      CHEVRON CHEMICAL COMPANY  
                 ORTHO DIVISION 940 HENSLEY WAY  
                 RICHMOND CA 94801

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

04221	ORTHO TORBIDAN 2-8 SPRAY	CA
04222	ORTHO TOXAPHENE 8 EMULSIVE	CA
04237	ORTHO TOXAPHENE-SULFUR 15-25 DUST	CA
04242	ORTHO PARATHION-TOXAPHENE 2-15 DUST	CA
04248	DIBROM-TOXAPHENE 1.5-6 EMULSIVE	CA

\*\*\*\*\*  
\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000279      FMC CORP.  
                 AGRICULTURAL CHEM DIV.  
                 100 NIAGARA ST.  
                 MIDDLE PORT NY 14105

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

03078	TOXAKIL 8.0 MISCIBLE	CA
03258	TOXAKIL 40 WETTABLE POWDER	CA

(00557)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000557      SWIFT AGRICULTURAL CHEMICAL  
                 CORP.  
                 111 WEST JACKSON BOULEVARD  
                 CHICAGO, IL 60604

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

06999	SWIFT'S SUPER GUARD 151 COTTON SPRAY	GA
07001	20% TOXAPHENE DUST (V200)	GA
07002	SWIFT'S GOLD BEAR TOXAPHENE-40% SULFUR DUST (VS20-40)	GA
07007	SWIFT'S SUPER GUARD 1.5 - 1.5-6 COTTON SPRAY	GA
07008	SWIFT'S SUPER GUARD 1-2-6 COTTON SPRAY	GA
07009	SWIFT'S SUPER GUARD 6-3 COTTON SPRAY	GA
07010	SWIFT'S SUPER GUARD TOXAPHENE 6E	GA

\*\*\*\*\*  
\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000909      COOKE LABORATORY PRODUCTS  
                 4759 S DUFFEE AVE  
                 PICO RIVERA CA 90660

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

04700	COOKE SYSTEMIC-PLUS FLOWER AND ORNAMENTAL INSECT SPRAY	CA
06414	COOKE SONBUG AND CUTWORM DUAL BAIT CONTROL	CA



1011911

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\* 001191 REGISTRANT

CAROLINA CHEMICALS INC

PO BOX 118

W COLUMBIA SC 29169

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

10372 FLIGHT BRAND TOXAPHENE-METHYL PARATHION 4-4 EC

\* 001202 REGISTRANT

PUREGRO COMPANY

1052 W 6TH ST

LOS ANGELES CA 90017

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

05006 PUREGRO METHYL PARATHION TOXAPHENE CAYOLITE DUST 2-15-30

AZ

05010 PUREGRO TOXAPHENE SULFUR 20-40 DUST

AZ

05018 PUREGRO TOXAPHENE 601

CA

05060 PUREGRO MALATHION-TOX 3-9

CA

05099 PUREGRO DIBROM TOXAPHENE 1.5-5 EMULSIVE

CA

1015261

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\* 001526 REGISTRANT

A G CHEM-CHEM DIST

P.O. BOX 21537

PHOENIX AZ 85036

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

09112 AGRO-CHEM BRAND TORBIDAN 28

AZ

09116 AGRO-CHEM BRAND TOXAPHENE 6-E METHYL PARATHION 3-E

AZ

\* 001812 REGISTRANT

GRIFFIN CORP

P.O. BOX 1847

VALDOSTA, GA 31601

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

03872 COTTON TOX DUST

SC

05434 COTTON TOX DUST

GA



{01842}

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 001842      TRIANGLE CHEMICAL COMPANY  
              BOX 4528  
              MACON GA 31208

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

03322    TRIANGLES MR. 4 X 4      GA

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 001871      FARMCRAFT, INC  
              8900 S W COMMERCIAL  
              TIGARD OR 97223

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

08924    FARMCRAFT TOXAPHENE 10 DUST      OR

08929    FARMCRAFT TOXAPHENE 8-E      OR

\*\*\*\*\*

{02342}

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 002342      KERR-MCGEE CHEMICAL CORP  
              MCP PKG & LABELING  
              KERR-MCGEE CENTER  
              OKLAHOMA CITY OK 73102

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

06944    FASCO TOXAPHENE BAIT-B      FL

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 002935      WILBUR ELLIS CO.  
              P. O. BOX 1286  
              FRESNO, CA 93715

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

06575    RED-TOP METHYL PARATHION 3 TOXAPHENE 6 SPRAY      AZ

06590    RED-TOP TOXAPHENE 8 SPRAY      MT

06647    RED-TOP PARATHION 2 TOXAPHENE 15 CRYOLITE 30 DUST      AZ

06648    RED-TOP PP 62      AZ

06656    RED-TOP NOVE-GUARD 1-8      AZ

06658    RED-TOP METHYL PARATHION 2 TOXAPHENE 15 CRYOLITE 30 DUST      AZ

06674    RED-TOP GT 123      AZ

06683    RED-TOP THIODAN 3 TOXAPHENE 15 SULFUR 40 DUST      CA

06684    RED-TOP THIODAN 3 TOXAPHENE 15 ZINEB 9 DUST      CA

06685    RED-TOP METHYL PARATHION 2 TOXAPHENE 8 SPRAY



(02935)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*\*CONTINUE REGISTRANT 002935

06685 PEO-TOP METHYL PARATHION 2 TOXAPHENE 8 SPRAY

CA

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 003122 SUPERIOR FERTILIZER & CHEM COMPANY ATTN: R BASS  
BOX 1021  
TAMPA FL 33600

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

07190 SUPERIOR TOXAPHENE 8-E

FL

07551 2% PARATHION-10% TOXAPHENE-6.50% ZINCH DUST

FL

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 003238 AGRICO CHEMICAL CO.  
CROP PROTECTION CHEMICAL DIV.  
BOX 3451  
TULSA, OK 74101

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

08985 STANDARD DI-TOX CATERPILLAR AND LAWN WORM SPRAY

FL

09061 STANDARD BRAND TOXAPHENE 40-W

FL

09062 STANDARD BRAND 10% TOXAPHENE 3.4% COPPER 65% SULPHUR DUST

FL

09063 STANDARD BRAND 20% TOXAPHENE 3.4% COPPER 40% SULPHUR DUST

FL

(03286)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 003286 FERO STAFFEL CO.  
P.O. BOX 2380  
SAN ANTONIO TX 78298

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

08037 STAFFEL'S TOXAPHENE 60

TX

08080 STAFFEL'S TOXAPHENE-LINDANE STOCK SPRAY & DIP

TX

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 003509 SAFE WAY FARM PRODUCTS COMPANY  
2519 E FIFTH ST  
AUSTIN TX 78702

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

06432 SILVERTOX

TX



(03743)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 003743      SOUTHERN AGRICULTURAL CHEMICALS INC  
PO BOX 527  
KINGSTREE SC 29556

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

07019	ROYAL BRAND TOX-MOX LOW VOLUME CONCENTRATE PESTICIDE	SC
07022	ROYAL BRAND TRIPLE KILL COTTON SPRAY 4-2-5	SC
07023	ROYAL BRAND TRIPLE KILL COTTON SPRAY 4-2-1	SC

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 004841      MICRO CHEM COMPANY  
BOX 711  
WINNABORO LA 71295

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

06128	MICRO TRIPLE-KILL F 10 DUST	LA
06133	MICRO TRIPLE-KILL "3F" MIX	LA
06135	MICRO TRIPLE-KILL D DUST	LA
06136	MICRO TRIPLE-KILL "F"	LA
06138	MICRO TRIPLE-KILL "LM" DUST	LA
06139	MICRO TRIPLE-KILL F16 DUST	LA
06141	MICRO BLEND MICRO-TOX 6-1-5	LA
06162	MICRO TRIPLE-KILL "F" MIX	LA

(04841)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*\*CONTINUE REGISTRANT 004841

06164	MICRO BLEND 20% TOXAPHENE DUST	LA
06250	MICRO TRIPLE - KILL M	LA
06598	MICRO TRIPLE-KILL "F"	LA

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 004977      SOUTHEASTERN INST CORP  
FSTILL SC 29918

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

08458	ATOMIC 4-2-1 TOXAPHENE ETHYL METHYL	SC
08459	ATOMIC 6-1.50 TOXAPHENE MALATHION ULV	SC
08464	ATOMIC 6# TOXAPHENE	SC
08465	ATOMIC 8# TOXAPHENE	SC
08466	ATOMIC 4-4 TOXAPHENE METHYL	SC
08468	ATOMIC 8 - 2 TOXAPHENE MALATHION	SC
08469	ATOMIC 6-3 TOXAPHENE METHYL	SC
08470	ATOMIC 6-2-1 TOXAPHENE METHYL ETHYL	SC
08471	ATOMIC 6-1.50 TOXAPHENE METHYL	SC
08472	ATOMIC 6-2 TOXAPHENE METHYL	SC

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## NOTICES

(05905)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 005905 HELENA CHEMICAL CO  
CLARK TOWER, 5100 POPLAR AVE, SUITE 2904  
MEMPHIS TN 38137

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

03108	HELENA BRAND METHYL PARATHION TOXAPHENE 3-6	FL
07574	HELENA BRAND 6 TOX-3 METHYL	TX
07592	TOXAPHENE -MALATHION	SC
07603	HELENA BRAND HEL-TOX M	AL
07900	HELEN BRAND METHYL PARATHION TOXAPHENE 3-6	FL

\*\*\*\*\*

\*\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 005967 MOYER CHEMICAL COMPANY  
BOX 945  
SAN JOSE CA 95108

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

06416	MALATHION TOXAPHENE BHC DUST NO 4-10-2	CA
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(06720)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 006720 SOUTHERN HILL CREEK PRODUCTS COMPANY INC  
BOX 1096  
TAMPA FL 33601

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

03356	SHCP TOXAPHENE EM-6	FL
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\*\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 006853 BES TEX INSECTICIDES  
713 S. OAKES PO BOX 664  
SAN ANGELO TX 76901

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

08611	BES-TEX LIVESTOCK DUST	TX
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\*\*\*\*\*

\*\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 006973 SOILSERV INC  
PO BOX 1817  
SALTINAS CA 93901

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

03586	SOILSERV TOXAPHENE 90	CA
03587	SOILSERV WEEVIL BAIT	CA

\*\*\*\*\*



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\*\*\*\*\*  
07989 SPRINGHILL ROSE SPRAY FL  
08000 FLORIDA GARDEN SPRAY FL  
08015 LAWN GUARDIAN EMULSIFIABLE CONCENTRATE FL  
08821 ROSE & POINSETTIA SPRAY FL  
08823 GARDENS OF THE SOUTH ROSE SPRAY FL  
08824 ROSE DUST FL

\*\*\*\*\*  
\* 007478 CHEM PAK COMPANY  
10402 S. W. 186TH TERRACE  
SOUTH MIAMI FL 33157  
\*\*\*\*\*  
\*REGISTRANT\*  
\*NAME AND ADDRESS\*

\*\*\*\*\*  
03391 TOXAPHENE LIQUID-6 TX  
03395 NOK-DUT 637 TX

\*\*\*\*\*  
\* 007467 WALLEY CO-OP OIL MILL  
BOX 1310  
HARLINGEN, TX 78550  
\*\*\*\*\*  
\*REGISTRANT\*  
\*NAME AND ADDRESS\*

\*\*\*\*\*  
03/08/77 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE  
(C7467) \*\*\*\*\*  
\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

\*\*\*\*\*  
08690 LAST-BITE NEW FORMULA SOMBUG AND CUTWORM KILLER CA  
\*\*\*\*\*  
\* 007621 CALIFORNIA LIQUID FERTILIZER COMPANY  
# 50 ARROYO ANNEX  
PASADENA CA 91105  
\*\*\*\*\*  
\*REGISTRANT\*  
\*NAME AND ADDRESS\*

\*\*\*\*\*  
04375 PHOS-TOX 6-3 AZ  
04382 PARA-TOX 3-6 AZ  
04383 TORBITAN 28 AZ  
04384 6 LB. TOXAPHENE AZ  
07666 MP-TOX 2-8 AQUAKIL CA  
07670 TOXAPHENE 8 EC CA

\*\*\*\*\*  
\* 007001 OCCIDENTAL CHEMICAL CO  
P O BOX 198  
LATHROP, CA 95330  
\*\*\*\*\*  
\*REGISTRANT\*  
\*NAME AND ADDRESS\*

\*\*\*\*\*  
03/08/77 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE  
107001 \*\*\*\*\*  
\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*



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## NOTICES

(08127)

\*\*\* PRODUCT SEARCH LISTING \*\*\*

03/08/77

APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 008127 AGGIE CHEMICAL INDUSTRY  
PO BOX 8335  
SAN ANTONIO TX 78208

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

05562 TOXAPHENE 6#

TX

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 008773 AMERICAN FERTILIZER & CHEMICAL COMPANY  
PO BOX 98  
HENDERSON CO 80640

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

04625 TOXAPHENE #5#

CO

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 009169 SEMINOLE STORES INC  
P O BOX 940  
OCALA FL

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

05293 MARICO BRAND 10X TOXAPHENE DUST

FL

(09782)

\*\*\* PRODUCT SEARCH LISTING \*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

PAGE 15

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 009782 WOODBURY CHEMICAL COMPANY  
PO BOX 4319  
PRINCETON FL 33030

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

03261 TOXAPHENE B-E

FL

03647 PARATHION-TOXAPHENE-SULFUR 2-5-70 DUST

FL

03668 TOXAPHENE-SULFUR 5-75 DUST

FL

03669 TOXAPHENE 10 DUST

FL

10402 SE TOXAPHENE BAIT

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 009859 LANDIA CHEMICAL COMPANY  
1801 W. OLIVE ST  
LAKELAND FL 33801

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

06214 TOXAPHENE EM8

FL

06996 SE TOXAPHENE BAIT

FL



1102261 \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*  
03/08/77 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE PAGE 17

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 010226 ROCKWOOD CHEM COMPANY  
BOX 34  
BRANLEY CA 92217  
  
\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
03781 ROCKWOOD BRAND TOXAPHENE 6 LB E.C. CA

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 010290 PROFESSIONAL CHEMICAL COMPANY INC  
P.O. BOX 94071 4517 YALE ST  
HOUSTON TX 77018  
  
\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
04933 SNAKE KILL TX

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 010371 CAPE CHEMICAL COMPANY  
33 N FREDERICK  
CAPE GIRARDEAU MO 63701  
  
\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
07403 CAPE-KIL BEEF SPRAY MI

1108731 \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*  
03/08/77 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE PAGE 18

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 010873 TIFTON CHEMICAL COMPANY  
PO BOX 5  
TIFTON GA 31794  
  
\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
07362 TIFCHEM 6-1 .50 COTTON SPRAY GA  
07363 TIFCHEM TOXAPHENE METHYL PARATHION DUST 20-21 GA

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 010951 BRITZ CHEMICAL COMPANY  
PO BOX 366  
FIVE POINTS CA 93624  
  
\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
09800 BRITZ BRAND TOXAPHENE 72 (EMULSIFIABLE) CA  
09808 BRITZ BRAND DIBROM-TOXAPHENE 1.5-5 EMULSIVE  
09811 BRITZ BRAND DIBROM 1-TOXAPHENE 8 CA



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NOTICES

(10965)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 010965 CALIFORNIA DEPT OF AGRICULTURE  
WEED & VERTEBRATE PEST CONTROL 1220 N ST  
SACRAMENTO CA 95814

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

09894 ANY APPROPRIATE PRODUCT CA

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 010972 CASTLE & L INC  
PO BOX 877  
MORGAN HILL CA 95037

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

05299 CASTLE BRAND TOXAPHENE 8E CA

06546 CASTLE BRAND DUST TOX-S 10-50 CA

07033 CASTLE BRAND TOXAPHENE 60E CA

\*\*\*\*\*

(11017)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 011017 FOSTER-GARDNER INC  
1577-1ST ST  
COACHELLA CA 92236

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

08195 TOXAPHENE 8 E CA

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 011093 MASTER NURSERYMEN'S ASSN C/O LEO DUPUICH  
3620 1/2 MT DIABLO BLVD  
LAFAYETTE CA 94549

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

07364 FORMULA 49 GOLD NUGGET ORGANIC BASE FERTILIZER CA

07365 49\*EP GOLD STRIKE BRAND LIGHTWEIGHT LAWN & DICHONDRA FERTILIZER CA

07370 49\*ER BRAND ROSE DUST CA

\*\*\*\*\*



1111241

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 011124      PANDCHE CHEMICAL & SUPPLY COMPANY  
40109 W BULLARD  
FIREBAUGH CA 93622

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

09005      PANDCHE TOXAPHENE 8 EC      CA  
09006      PANDCHE METHYL PARATHION 2 TOXAPHENE 8      CA

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 011204      STONE & SON E B  
PO BOX 57  
SALINAS CA 93901

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

04100      GREENHALL SOIL INSECTICIDE AND LAWN MOTH CONTROL      CA  
04101      GREENHALL TURF FERTILIZER WITH INSECTICIDE      CA  
06727      GREENHALL LAWN & GARDEN FERTILIZER INSECTICIDE ADDED      CA

\*\*\*\*\*

1113691

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

PAGE 22

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 011369      BAKERSFIELD AG CHEM INC  
PO BOX 5062  
OTLDALF CA 93308

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

08778      PAC TOXAPHENE SPRAY 8E      CA

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 011656      WESTERN FARM SERVICE INC SWEET CHEM COMPANY  
1025 CONNECTICUT AVE-STE 200  
WASH DC 20036

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

05714      METHYL PARATHION TOX SULPHUR 2-15-40      AZ  
05734      M-PARA-TOX-KRY 2-10-30      AZ  
05735      M-P TOX 2-20      AZ  
05741      TOXAPHENE 8-E EMULSIFIABLE LIQUID      AZ  
05748      TORBTOAN 28      AZ  
05750      PARATOX 36      AZ  
05772      TOXAPHENE 6-E      CA  
05891      TOXAPHENE 8E EMULSIFIABLE LIQUID      CA  
05905      OIBROM - TOXAPHENE 1.5-6 E      CA  
05906      DIMETHOATE TOXAPHENE .5-3 EC      CA

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## NOTICES

(12062)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
 \*REGISTRANT\* \*NAME AND ADDRESS\*  
 \* 012062 PRO-BOLL CHEMICAL COMPANY  
 PO BOX 54  
 CROWNVILLE LA 71230

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

10127	PRO-BOLL LA-LO 44	LA
10128	PRO-BOLL B-2	LA
10129	PRO-BOLL 6-11	LA
10130	PRO-BOLL 6-3	LA

\*\*\*\*\*  
 \*REGISTRANT\* \*NAME AND ADDRESS\*  
 \* 013166 APCLO ENTERPRISES INC  
 ROUTE 1  
 ALTHEIMER AR 72004

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

07513	POWER 6-1.5	AR
07515	B TOXAPHENE-2 METHYL PARATHION	AR

(14775)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

PAGE 24

\*\*\*\*\*  
 \*REGISTRANT\* \*NAME AND ADDRESS\*  
 \* 014775 ASGROW FLORIDA COMPANY  
 PO DRAWER D  
 PLANT CITY FL 33566

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

08726	PARATHION-TOXAPHENE DUST NO. 6 (2% PARATHION-10% TOXAPHENE) FI-6	FL
08748	TOXAPHENE 40 WETTABLE (40% TOXAPHENE)	FL
08749	TOXAPHENE-MANGANESE-SULPHUR DUST NO. 1 (1% TOXAPHENE)	FL
08750	TOXAPHENE BAIT NO. 7 (5% TOXAPHENE) (B-7)	FL
08751	TOXAPHENE DUST NO. 2 (10% TOXAPHENE) (I-2)	FL
10095	TOX-ETHYL 6-2 EMULSIVE	FL
10539	TOXAPHENE-METALDEHYDE BAIT NO. 10 (B-10)	

\*\*\*\*\*  
 \*REGISTRANT\* \*NAME AND ADDRESS\*  
 \* 015575 SOUTHLAND AGRICULTURAL CHEMICAL COMPANY  
 PO BOX 6207  
 MONTGOMERY AL 36106

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

05325	TOXAPHENE BF	AL
05329	SUPPP KILL 4-4	AL
05337	4-3-1 COTTON SPRAY	AL



(15887)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE PAGE 25

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 019887 AGRICULTURAL CHEMICALS OF DALLAS  
3707 EAST KIEST BLVD.  
DALLAS, TX. 75203

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

04929 HI BRAND TOXAPHENE E-6

TX

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 023442 INDUSTRIAL CHEMICAL SERVICE INC  
938 MILAN STREET  
SHREVEPORT LA

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

06957 FASCO TERPENE PARATHION 4-1 EC

FL

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 031143 SMITH COMPANY OF UVALDE  
P O BOX 1000  
UVALDE TX 78801

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

05453 CROP-LIFE PARATHION-TOXAPHENE 2-20 DUST

TX

(13292)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 032928 CHEMSPRAY, INC.  
1550 E. SEVENTH STREET  
PAHOKEE, FL. 33576

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

05925 PRODUCT NO. 8

FL

05926 PRODUCT NO. 7

FL

05932 8 LB. TOXAPHENE

FL

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 033352 CONSOLIDATED CHEMICALS INC  
1000 NORTH STATE MARKET RD  
PAHOKEE, FL 33476

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

07631 TOXAPHENE 8F

FL



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## NOTICES

(33722)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 033722 TEX AG COMPANY INC  
P O BOX 633  
MISSION, TX 78572

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

03272 TOXAPHENE 5 LB. TX  
03277 POWER-TOX TX\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 035133 CRYER PEST CONTROL, INC  
215 S. HWY 146  
BAYTOWN, TX 77520

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

09321 C&amp;C PROFESSIONAL MOSQUITO SPRAY TX

(35222)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

PAGE 28

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 035222 SOUTHERN CHEMICALS, INC.  
204 N. ELM AVE, BOX 1480  
SANFORD, FL 32771

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

07152 DI-TOX 28 FL  
07162 SOUTHERN'S TOXAPHENE - 10 FL  
07172 SOUTHERN'S METHYL PARATHION-PARATHION-TOXAPHENE 5-5-4-E FL  
07174 TOXAPHENE EMULSION CONCENTRATE FL  
07176 SOUTHERN'S TOXAPHENE BAIT FL\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 035253 AGRA CHEM SALES COMPANY  
P. O. BOX 1356  
AVON PARK, FL 33825

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

06038 71% TOXAPHENE EMULSIFIABLE FL  
08629 LINDANE-TOXAPHENE LIVESTOCK SPRAY OR DIP FL



## NOTICES

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(35296)

\*\*\* PRODUCT SEARCH LISTING \*\*\*

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APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 035296 TOXO-SPRAY DUST, INC.  
300 MAIN ST.  
TUSTIN, CA 92680

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

05807 TOXOPHENE EMULSIFIABLE NO.8 CA  
05811 TOXO TOXOPHENE SEVIN-S DUST NO. 10-5-50 CA

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 037854 AGRICULTURAL SUPPLIES OF BATESVILLE, INC.  
BOX 6  
BATESVILLE, TX 78829

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

08303 FALL OUT TOXAPHENE 6-E TX

\*\*\*\*\*



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## NOTICES

(00059)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\*

## \*NAME AND ADDRESS\*

\* 000059 BURROUGHS WELLCOME COMPANY  
BURROUGHS WELLCOME COMPANY  
3030 CORNWALLIS ROAD  
RESEARCH TRIANGLE PARK, NC 27709

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00028 COOPER-TOX LIVESTOCK  
00039 AGRICULTURAL COOPER-TOX #6 TOXAPHENE EMULSIFIABLE CONCENT.  
00055 COOPER - TOX EXTRA  
00089 COOPER BACK RUBBER CONCENTRATE  
00096 FENATOX  
00127 COOPER HOG MANGE CURE  
00139 COOPER TOX EXTRA DUST  
00152 COOPER TOX V EMULSIFIABLE LIQUID  
00165 COOPER DRY INSECTICIDE CONTAINS TOXAPHENE

\*\*\*\*\*  
\*REGISTRANT\*

## \*NAME AND ADDRESS\*

\* 000070 RIGO COMPANY, INC.  
1200 FORT WAYNE NAT'L BANK BLDG.  
FORT WAYNE, IN 46802

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00096 KILL-KO STOCK SPRAY AND DIP

(00092)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\*

## \*NAME AND ADDRESS\*

\* 000092 TENNECO CHEMICAL INC  
INTERMEDIATES DIV TURNER PL PO BOX 2  
PISCATAWAY NJ 08854

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00016 STROBANE-T 90% TOXAPHENE SOLUTION INSECTICIDAL TOXICANT  
00034 STROBANE-T TOXAPHENE

\*\*\*\*\*  
\*REGISTRANT\*

## \*NAME AND ADDRESS\*

\* 000134 HESS AND CLARK DIV OF RHODIA INC  
ASHLAND OH 44805  
ASHLAND, OH 44805

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00050 DRYCIDE FORMULATED WITH TOXAPHENE



(00148)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000148      THOMPSON-HAYWARD CHEMICAL COMPANY  
              BOX 2383  
              KANSAS CITY KS 66110

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00158 DE-PESTER TOXAPHENE E-6  
00495 DE-PESTER TOXAPHENE-L STOCK SPRAY AND DIP  
00731 DE-PESTER COTTON SPRAY 3-0-4 METHYL PARATHION TOXAPHENE  
00786 DE-PESTER TOXAPHENE 85-15  
00820 COTTON SPRAY 6-0-3  
00836 DE-PESTER TOXAPHENE E-8  
00859 DE-PESTER COTTON DUST 20-0-0 (TOXAPHENE)  
00903 DE-PESTER BAGWORM AND SOD WEBWORM SPRAY  
00913 DE-PESTER LIVESTOCK DUST  
00917 DE-PESTER PROFESSIONAL BAGWORM & SOD WEBWORM SPRAY  
00990 COTTON SPRAY 6-0-2  
01012 T-H TOXAPHENE 6 LBS. EMULSION CONCENTRATE  
01014 T-H 20% TOXAPHENE DUST  
01018 T-H 20-40 DUST CONTAINING TOXAPHENE & SULPHUR  
01020 T-H TOXAPHENE-PARATHION DUST  
01126 COTTON SPRAY 6-0-1.5 TOXAPHENE-METHYL PARATHION  
01131 DE-PESTO-TOX

(00168)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000168      WASATCH CHEMICAL DIVISION ENTRADA IND INC  
              P O BOX 6219  
              SALT LAKE CITY UT 84106

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00162 TOXAPHENE-8 EMULSIBLE LIQUID  
00381 WASCO TOXAPHENE 40% WETTABLE POWDER  
00421 WASCO BACKRUBBER SOLUTION

\*\*\*\*\*  
\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000226      TOBACCO STATES CHEMICAL COMPANY  
              BOX 479  
              LEXINGTON KY 40501

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00028 TOBACCO STATES BRAND 20% TOXAPHENE DUST  
00039 TOBACCO STATES BRAND \*\*\* TOXAPHENE 6 LBS. EMULSION CONCENTRATE  
00149 TOBACCO STATES BRAND TOX 450 DIP-SPRAY CONCENTRATE  
00165 TOBACCO STATES BRAND EVERGREEN SPRAY  
00201 TOBACCO STATES BRAND IMPROVED BACKRUBBER OIL







FEDERAL REGISTER, VOL. 42, NO. 101--WEDNESDAY, MAY 25, 1977

\*\*\*\*\*  
02966 METHYL PARATHION 2.5 THIODAN 2.5 TOXAPHENE 10 DUST  
02899 MANEB 3.5 SULFUR 50 TOXAPHENE 5 DUST CODE 20028  
02888 TOXAKIL 20 DUST INSECTICIDE  
02802 SULFUR 61 TOXAPHENE 7.5 DUST CODE 20005  
02790 COPPER 3.4 SULFUR 60 TOXAPHENE 15 PEANUT DUST  
02793 METHYL PARATHION 2 TOXAPHENE 15 DUST  
02719 NIAGARA PARATHION 3 TOXAPHENE 5 P.C. CODE 20418  
02716 FMC NYNAMILTE 44 INSECTICIDE  
02561 CODE 2122 NIAGARA NYNAMILTE 63 INSECTICIDE  
02150 NIAGARA CRYOLITE 30 PARATHION 2 TOXAPHENE 10 DUST  
01505 NIAGARA TOXAKIL 40 WETTABLE POWDER  
01390 NIAGARA TOXAKIL 8.0 MISCIBLE CODE 1047  
01367 NIAGARA TOXAKIL 10 PHOS 2 DUST  
01225 NIAGARA TOXAKIL 20 PHOS KIL 2 DUST CODE 1300  
01095 NIAGARA MANGASULPHAM 10 TOXAKIL 5 DUST  
\*\*\*\*\*  
FEDERAL REGISTER 000279  
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\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

100279) \*\*\*\*\*  
00407 NIAGARA TOXAKIL 20 SULPHUR 40 DUST (CODE 185)  
00405 TOXAKIL MISCIBLE  
\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
100 NIAGARA ST.  
MIDDLE PORT NY 14105  
FMC CORP.  
AGRICULTURAL CHEM DIV.  
\*\*\*\*\*  
FEDERAL REGISTER 000279  
01/08/77  
\*\*\*\*\*  
00018 FARMAH TOXANDX \* PLUS  
\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
\*  
PHOENIX, AZ 85036  
P O BOX 21447  
FARMAH COMPANIES INC  
\*\*\*\*\*  
FEDERAL REGISTER 000270  
01/08/77  
\*\*\*\*\*  
00096 MALATHION T-X LIVESTOCK SPRAY  
\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
AMERICAN CYANAMID COMPANY  
BOX 400  
PRINCETON NJ 08540  
\*\*\*\*\*  
FEDERAL REGISTER 000241  
01/08/77  
\*\*\*\*\*  
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\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*\*\*\*\*

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
00044 FRANKLIN TOXAPHENE LINDANE SPRAY MIX

\* 000410  
FRANKLIN LABORATORIES INC  
PO BOX 22335-WELLSHIRE STATION  
DENVER CO 80222  
\*\*\*\*\* NAME AND ADDRESS \*\*\*\*\*

\*\*\*\*\*

00293 IMPERIAL TOMATO DUST FOR DISEASE & INSECT CONTROL  
00300 IMPERIAL NO. 6 TOXAPHENE E.C.  
00301 IMPERIAL 10% TOXAPHENE GRANULAR INSECTICIDE  
00309 IMPERIAL STOCK-TOX TWO LIVES TOX SPRAY CONCENTRATE  
00322 IMPERIAL LIVES TOX TOXAPHENE  
00323 DRY INSECTICIDE FOR BEEF CATTLE, SWINE, HORSES  
00328 IMPERIAL 15% TOXAPHENE GRANULAR INSECTICIDE

\* 000407  
IMPERIAL INC  
BOX 423  
SHENANDOAH IA 51601  
\*\*\*\*\* NAME AND ADDRESS \*\*\*\*\*

\*\*\*\*\*

03/08/77 1004071

\*\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*\*

\*\*\*\*\*

00062 TPC TOX-A-DANE  
00073 DR ROGERS' MAL-PHENE  
00078 PRO BRAND PRO TOX M  
00100 DR. ROGERS' TOX-ENE  
00121 TPC TOX-ENE-V EMULSIFIABLE CONCENTRATE CONTAINING TOXAPHENE & YAPONA

\* 000327  
TEXAS PHENOTHAZINE COMPANY  
BOX 4186  
FT WORTH TX 76106  
\*\*\*\*\* NAME AND ADDRESS \*\*\*\*\*

\*\*\*\*\*

00057 MARTIN'S STOCK-TOX-A WATER MISCIBLE TOXAPHENE CONCENTRATE  
00077 MARTIN'S SUPER STOCK TOX  
00118 BEEF CATTLE DUST  
00175 MARTIN'S STOCK TOX 6112 TOXAPHENE EMULSIFIABLE CONCENTRATE  
00176 MARTIN'S STOCK TOX 6115 TOXAPHENE EMULSIFIABLE CONCENTRATE

\* 000299  
MARTIN C J COMPANY  
606 W MAIN PO BOX 1069  
NACOGDOCHES TX 75961  
\*\*\*\*\* NAME AND ADDRESS \*\*\*\*\*

\*\*\*\*\*

03/08/77 1002991

\*\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*\*

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(00449)

## \*\*\* PRODUCT SEARCH LISTING \*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000449      TECHNE CORPORATION  
                 C/O REGULATORY AFFAIRS DEPT. FARMLAND IND., INC.  
                 P. O. BOX 7305  
                 KANSAS CITY, MO 64116

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00249      TOXALIN  
00310      VAPOR-TOX  
00462      SURE DEATH BRAND PARATHION TOXAPHENE 1-10 DUST  
00509      SURE DEATH BRAND TOXAPHENE 40-W  
00531      6LB TOXAPHENE EMULSIFIABLE  
00532      9 LB. TOXAPHENE EMULSIFIABLE  
00535      TECHNE TOXAPHENE 10% GRANULAR INSECTICIDE  
00541      TOXAPHENE 15% GRANULAR INSECTICIDE

\*\*\*\*\*  
\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000450      MILLER CHEMICAL COMPANY INC  
                 1441 CALIFORNIA ST  
                 OMAHA NE 68102

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00133      MILLER STOX-SPRAY CONCENTRATE

(00413)

## \*\*\* PRODUCT SEARCH LISTING \*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000413      BARTELS & SHORES CHEMICAL COMPANY  
                 1400-02 ST LOUIS AVE  
                 KANSAS CITY, MO 64101

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00038      PIONEER BRAND LIVESTOCK CONCENTRATE B-TOX  
00064      PIONEER BRAND TOXAPHENE EMULSIFIABLE CONCENTRATE

\*\*\*\*\*  
\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000436      STANDARD CHEMICAL MFG COMPANY  
                 701 S 42ND ST  
                 OMAHA, NE 68103

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00017      STANDARD'S LIN-TOX LIVESTOCK SPRAY AND DIP



26884

NOTICES

(00471) \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 000471 FIELD HENRY SEED & NURSERY  
407 SYCAMORE ST  
SHENANDOAH IA 51601

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00011 HENRY FIELD'S TOMATO DUST

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 000476 STAUFFER CHEMICAL COMPANY LABELING & REGISTRATION  
DEPT 1200 SOUTH 4TH ST  
RICHMOND, CA 94804

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00176 TOXAPHENE-SULPHUR 20-40 DUST

00369 STAUFFER TOXAPHENE B-E

00486 STAUFFER \*\*\* TOXAPHENE EMULSIFIABLE CONCENTRATE NO. 601

00489 TOXAPHENE B EC

01142 TOXAPHENE S-EH

01329 PARATHION-TOXAPHENE 2-10 DUST

01528 TOXAPHENE A-E STOCK SPRAY & BACK RUBBER CONCENTRATE

01913 LINDANE TOXAPHENE 2-4% LIVESTOCK SPRAY AND OILER CONCENTRATE

02011 TORRIDAN 28

02133 TOXAPHENE AD-WP AGRICULTURAL INSECTICIDE WETTABLE POWDER

\*\*\*\*\*

(00483) \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 000483 PACIFIC SUPPLY CORP  
PO BOX 3588  
PORTLAND OR 97208

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00130 PACIFIC COOPERATIVES TOX OIL

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 000523 ROBERTS LAB DIV HOPKINS AGR CHEM  
4995 N MAIN ST  
ROCKFORD IL 61101

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00036 DR. ROBERTS BACKRUBBER OIL

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 000524 MONSANTO COMPANY  
AGRICULTURAL PRODUCTS  
800 N. LINDBERGH BLVD.  
ST. LOUIS, MO 63166

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00275 NITRAN 44

\*\*\*\*\*



(00528)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 000528 AMSCO DIVISION UNION OIL COMPANY OF CALIFORNIA  
825 SE THORNTON  
MINNEAPOLIS MN 55414

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00041 KRITTER SPRAY CATTLE OILER READY TO USE

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 000548 RILEY BROS INC  
850 WASHINGTON  
HURLINGTON IA 52601

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00030 RILEY BROS. 5% TOXAPHENE BACK RUBBER LIQUID INSECTICIDE

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 000554 AGSCO INC  
BOX 458  
GRAND FORKS ND 58201

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00126 AGSCO TOXAPHENE E-6 AGRICULTURAL INSECTICIDE

(00557)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 000557 SWIFT AGRICULTURAL CHEMICAL  
CORP.  
111 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

01876 SWIFT TOXAPHENE V5E

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 000602 RALSTON PURINA COMPANY  
CHECKERBOARD SQUARE  
ST LOUIS MO 63188

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00037 PURINA LIQUID STOCK SPRAY

00044 PURINA RANGE CATTLE SPRAY

00112 PURINA STOCK SPRAY SPECIAL

00118 PURINA BACK SCRATCH TOXAPHENE LINDANE CONCENTRATE



26886

NOTICES

(00606)

\*\*\* PRODUCT SEARCH LISTING \*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*  
 \* 000606      CORN KING DIVISION THE  
                  KING CASTLE INC PO BOX 189  
                  MARION IA 52302

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00095      HUBBARD PREMIUM STOCK SPRAY

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*  
 \* 000635      F-Z FLO CHEM. COMPANY, DIV OF GROWER SERVICE CORP.  
                  P O BOX 808  
                  LANSTING, MT 48901

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00263      E-Z-FLO TOXAPHENE EMULSIFIABLE CONCENTRATE

00554      F Z FLO 2% PARATHION 20% TOXAPHENE DUST

\*\*\*\*\*

(00642)

\*\*\* PRODUCT SEARCH LISTING \*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*  
 \* 000642      THOMPSON CHEMICALS CORP  
                  23529 S FIGUEROA ST  
                  WILMINGTON CA 90744

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00103      THOMPSON'S MULTI-TOX TL LIVESTOCK SPRAY & DIP

00143      THOMPSON'S MULTI - TOX TM NEW & IMPROVED EMULSIFIABLE CONCENTRATE

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*  
 \* 000655      PRENTISS DRUG & CHEMICAL COMPANY INC  
                  363 7TH AVE  
                  NEW YORK NY 10001

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00074      PRENTOX TOXAPHENE 8 LB. EMULSIFIABLE

\*\*\*\*\*



(00746)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

REGISTRANT	NAME AND ADDRESS
* 000746	MFA OIL CO P.O. BOX 519 COLUMBIA MO 65201

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00026	M.F.A. EVERGREEN SPRAY CONCENTRATE
00040	M.F.A. LIVESTOCK TOXAPHENE
00048	M.F.A. TOMATO DUST
00049	M.F.A. DRY DIP
00068	M. F. A. NO. 6 TOXAPHENE E. C. FOR FIELD CROP USE ONLY

\*\*\*\*\*

REGISTRANT	NAME AND ADDRESS
* 000769	WOOLFOLK CHEMICAL WORKS INC PO BOX 938 E. VALLEY CA 91030

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00060	SECURITY BRAND 20-40 COTTON DUST TOXAPHENE-SULPHUR
00109	20 TOXAPHENE DUST SECURITY BRAND
00136	SECURITY BRAND TOX-SOL-6
00394	SECURITY MOTOX 63 COTTON SPRAY
00436	SECURITY TOX-WP COTTON SPRAY 8-2
00437	SECURITY TOX-SOL-8

(00769)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*\*CONTINUE REGISTRANT 000769

00447	SECURITY SUPER-TOX COTTON SPRAY 4-3-1
00448	SECURITY TOX-WP COTTON SPRAY 6-1 1/2
00451	SECURITY 10X TOXAPHENE DUST

\*\*\*\*\*

REGISTRANT	NAME AND ADDRESS
* 000802	LILLY CHAS F COMPANY MILLER RD DIV 7737 N.E. KILLINGSWORTH PORTLAND, OR 97218

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00112	MILLER'S PESTKIL
00456	MILLER'S TOXAPHENE 40W
00486	MILLER'S TOXAPHENE 8E AGRICULTURAL INSECTICIDE

\*\*\*\*\*

REGISTRANT	NAME AND ADDRESS
* 000829	SOUTHERN AGRI INSPECT INC PO BOX 218 PALMETTO FL 33561

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00048	S & SO CUT WORM AND MOLE CRICKET BAIT
00056	SA-50 BRAND PRE-HEADING CABBAGE DUST WITH TOXAPHENE
00088	SA-50 BRAND PRE-HEAD DUST 2-20



{00891}

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000891      HERCULES INC AGRICULTURAL CHEMICAL  
                 SYNTHETIC DEPT  
                 WILMINGTON DE 19899  
                 WILMINGTON DE 19899

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00001    TOXAPHENE AN INSECTICIDAL TOXICANT  
00010    HERCULES TOXAPHENE SOLUTION  
00011    HERCULES TOXAPHENE 40% DUST  
00020    TOXAPHENE 60% EMULSIFIABLE CONCENTRATE INSECTICIDE  
00021    HERCULES TOXAPHENE BACK RUBBER CONCENTRATE TO BE MIXED WITH OIL  
00023    HERCULES TOXAPHENE 72% EMULSIFIABLE CONCENTRATE  
00029    HERCULES TOXAPHENE 20% DUST INSECTICIDE  
00106    HERCULES TORBIDAN 28  
00107    HERCULES TORBIDAN 18  
00115    HERCULES TOXAPHENE 80% CONCENTRATE  
00136    HERCULES TOXAPHENE 10% GRANULAR INSECTICIDE  
00138    HERCULES TOXAPHENE 65% EMULSIFIABLE LIVESTOCK CONCENTRATE  
00159    HERCULES TECHNICAL MATERIAL MALATHION INSECT TOXICANT FOR M.U.O.  
00165    HERCULES TOXAPHENE 15% GRANULAR INSECTICIDE  
00173    HERCULES TORBIDAN 8-1.5

\*\*\*\*\*

{00909}

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000909      COOKE LABORATORY PRODUCTS  
                 4759 S DURFEE AVE  
                 PICO RIVERA CA 90660

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00064    COOKE ROSE DUST  
00067    COOKE BUG SHOT LAWN SPECIAL SPRAY CONCENTRATE

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 000912      FARMERS UNION CENTRAL EXCHANGE INC  
                 POST OFFICE BOX 404  
                 ST PAUL MN 55165

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00027    CO-OP BACKRUBBER OIL  
00056    CO-OP STOCK TOX PLS LIVESTOCK SPRAY CONCENTRATE

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## NOTICES

26889

(01007)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 001007 PFIZER INC.  
235 EAST 42ND ST.  
NEW YORK NY 10017

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00041 GLO-TOX TOXAPHENE-MALATHION

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 001021 MCLAUGHLIN GORMLEY KING COMPANY  
8810 10TH AVE NW  
MINNEAPOLIS MN 55427

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

01092 MCK MOTHPROOF MIX 1840

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 001022 CHAPMAN CHEMICAL COMPANY  
BOX 9158  
MEMPHIS TN 38109

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00034 CHAPMAN TOXAPHENE-6

\*\*\*\*\*

(01026)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 001026 CHAP STICK COMPANY  
1000 ROBINS RD  
LYNCHBURG VA 24505

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00007 CEDAR SCENTED MOTH SPRAY

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 001029 ATOEX CORPORATION  
P.O. BOX 7349  
OMAHA, NE 68107

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00059 TOX-LIN EMULSIBLE CONCENTRATE

00073 ATOEX TOXAPHENE 10% GRANULAR INSECTICIDE

00075 ATOEX TOXAPHENE 5% EMULS. INSECT/CONT. OF CETPAIN INSECTS

00090 ATOEX TOXAPHENE 15G

00085 TOXAPHENE 90-10

00086 MANGEX FOR HOGS, CATTLE, SHEEP AND GOATS

00089 MAL-TOX LIVESTOCK INSECTICIDE FOR SPRAY-DIP-OILER

00097 TOXAPHENE-65 FOR MANUFACTURING PURPOSES ONLY

00103 TOXAPHENE 95-15

00109 ATOEX 5% TOXAPHENE RACK RUBBER SOLUTION

FEDERAL REGISTER, VOL. 42, NO. 101—WEDNESDAY, MAY 25, 1977

AR\_0033483



26890

## NOTICES

(01029)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

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\*\*CONTINUE REGISTRANT 001029

00130 TOXAPHENE 40% DUST

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 001063 VALLEY CHEMICAL COMPANY  
BOX 1317  
GREENVILLE MS 38702

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00004 VALCO BRAND TOXAPHENE 20-0

00105 VALCO BRAND TOXAPHENE EMULSIFIABLE NO. 5

00114 VALCO BRAND TOX-A-ME 63

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 001145 AMOCO OIL CO.  
200 E. RANDOLPH DR.  
CHICAGO IL 60601

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00121 BOVINOL T-L44 FOR BEEF CATTLE HOGS-SHEEP-GOATS BUILDINGS

00138 AMOCO TOXAPHENE SPRAY

(01191)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 001191 CAROLINA CHEMICALS INC  
PO BOX 118  
W COLUMBIA SC 29169

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00001 FLIGHT BRAND TOXAPHENE SULPHUR 20-40

00002 TOXAPHENE DUST 20 - 0

00034 TOXAPHENE 5 EMULSIFIABLE

00035 TOXAPHENE 8 EMUL CONC

00294 TOXAPHENE METHYL PARATHION EC 8-2

00298 FLIGHT BRAND 20% TOXAPHENE DUST

00306 FLIGHT BRAND BHC 3-5-0 DUST

00309 FLIGHT BRAND TOXAPHENE METHYL PARATHION EC 6-2

00310 FLIGHT BRAND TOXAPHENE-METHYL PARATHION EC 6-1 1/2

00311 FLIGHT BRAND TOXAPHENE-METHYL PARATHION EC 6-3

00329 FLIGHT BRAND TOXAPHENE-METHYL PARATHION LV 3.95-0.99

00332 FLIGHT BRAND TOXAPHENE MALATHION ULV CONCENTRATE 1 1/2-6

00340 FLIGHT BRAND TOXAPHENE 805



## NOTICES

26891

1012021

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 001202 PUREGRO COMPANY  
1052 W 6TH ST  
LOS ANGELES CA 90017

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00253 TORBIDAN 28  
00271 PUREGRO TOXAPHENE 8 LIQUID  
00306 PUREGRO TOXAPHENE METHYL PARATHION 6-3F

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 001208 JANSON IND PLAINSMAN AGRICULTURAL  
BOX 174  
PLAINVIEW, TX 79880

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00011 PLAINSMAN 60 T EMULSIFIABLE TOXAPHENE

\*\*\*\*\*

1012581

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 001258 OLIN CHEMICALS  
OLIN CORPORATION  
120 LONG RIDGE ROAD  
STAMFORD, CT 06904

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00699 TOXAPHENE 6 LB. EMULSIFIABLE  
00794 TOXAPHENE METHYL PARATHION 6LB-3LB  
00816 TOXAPHENE-METHYL PARATHION 8LB. 2 LB. EMULSIFIABLE  
00828 OLIN TOXAPHENE-METHYL PARATHION 4 LB - 4 LB. EMULSIFIABLE  
00834 TOXAPHENE 5 LB EMULSIFIABLE LIQUID  
00835 MAGNUM 44 EMULSIFIABLE  
00962 OLIN TOXAPHENE METHYL PARATHION 6 LB 1.5 LB. EMULSIFIABLE

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 001304 FURST MCNESS COMPANY  
120 E CLARK ST  
FREEPORT IL 61032

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00053 MCNESS RANGE OIL CONCENTRATE

\*\*\*\*\*



\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\* 001307

MAGNOLIA CHEMICAL CO INC  
2646 RODNEY LANE  
DALLAS TX 75220

\*NAME AND ADDRESS\*

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00060 MAL-PHENE SUPER LIVESTOCK SPRAY EMULSIFIABLE CONCENTRATE  
00099 MAGNA-TOX SUPER #150

\* 001339

COTTON STATES CHEM CO INC  
P O DRAWER 157  
W MONROE LA 71291

\*NAME AND ADDRESS\*

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00006 COTTON STATES TOXAPHENE 20X CUST

00020 TOXAPHENE-5 EMULSIFIABLE CONCENTRATE INSECTICIDE

00051 COTTON STATES TOXANE EMULSIFIABLE

00189 COTTON STATES TORBIDAN 28

00191 PARATOX

00199 TOXAPHENE-8 EMULSIFIABLE

00206 COTTON STATES KETOXIL NO. 63

00207 COTTON STATES NO. 42 TOX-MP

00208 COTTON STATES KETOXIL NO. 44

(01339)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

\*\*\*\*\* REGISTRANT 001339 \*\*\*\*\*

00218 KETOXIL NO. 6-1.5

\* REGISTRANT \*

SELCO SUPPLY COMPANY  
CELLING AVE E R  
FAYON CO 80615

\*NAME AND ADDRESS\*

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00038 SELCO BRAND TOXAPHENE 66 EMULSIFIABLE

00108 SELCO SELECTOX LIVESTOCK SPRAY TOXAPHENE AND LINDANE

00195 SELCO TOXAPHENE 61 SPECIAL LIVESTOCK SPRAY AND DIP

\* REGISTRANT \*

LAND O'LAKES C/O IMPERIAL INC  
PO BOX 423  
SHENANDOAH IA 51601

\*NAME AND ADDRESS\*

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00052 SELCO TOXAPHENE EMULSIFIABLE CONCENTRATE

00068 SELCO/STATEX STOCK-TOX PLUS LIVESTOCK SPRAY CONCENTRATE

FEDERAL REGISTER, VOL. 42, NO. 101—WEDNESDAY, MAY 25, 1977



1013861

\*\*\* PRODUCT SEARCH LISTING \*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 001386      UNIVERSAL COOPERATIVES INC  
                PO BOX 836  
                ALLIANCE OH 44601

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00034      UNICO TOXAPHENE EMULSION CONC  
00234      UNICO 5X TOXAPHENE BACK RUBBER SOLUTION  
00284      UNICO LIVESTOCK SPRAY CONCENTRATE

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 001526      A G CHEM-CHEM DIST  
                ARIZONA AGROCHEMICAL CO.  
                P.O. BOX 21537  
                PHOENIX AZ 85036

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00351      PHOENIX BRAND DYLOX 3 TOXAPHENE 10 WITH 50% SULFUR  
00377      TOXAPHENE EC-60 EMULSIFIABLE  
00438      PHOENIX BRAND PHOSPHO KIL-5 TOXAPHENE 10  
00479      PHOENIX BRAND TORRIDAN 28  
00499      AGRO-CHEM BRAND TOXAPHENE 6-E

\*\*\*\*\*

1015261

\*\*\* PRODUCT SEARCH LISTING \*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 001528      SHEPARD LARS  
                DIV OF NEBRASKA PRODUCING & REFINING  
                1521 NW 11TH STREET  
                OMAHA, NE 68110

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00010      SHEPS TOXAPHENE LINDANE EMULSIFIABLE CONCENTRATE STOCK SPRAY & DIP

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*  
\* 001598      FCX INC  
                P O BOX 2419  
                PALEIGH, NC 27642

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00086      FCX TOXAPHENE-6 EMULSIFIABLE CONCENTRATE  
00154      FCX FARM CHEMICALS 20-0 TOXAPHENE DUST  
00168      10X TOXAPHENE DUST  
00204      FCX #82% SPRAY  
00212      FCX METHYL PARATOX 63  
00218      FCX 6-1.5 PC COTTON INSECTICIDE  
00231      FCX 6-1.5 BRAN SPRAY  
00235      TOXAPHENE 8 EMULSIFIABLE INSECTICIDE

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26894

## NOTICES

(01737)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 001737 SOUTHWEST GREASE & OIL CO (OMAHA) INC  
20TH & WILLIAMS STS  
OMAHA, NE 68108

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00008 SOS TOXAPHENE BACK RUBBER OIL

00011 KNOX-EM-KOLD CATTLE BACKRUBBER OIL

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 001772 HOLDER CORP THE  
1421 FIFTH AVE  
HUNTINGTON WV 25702

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00082 CHEMFORM BRAND EVERGREEN SPRAY CONCENTRATE

(01812)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 001812 GRIFFIN CORP.  
P.O. BOX 1847  
VALDOSTA, GA 31601

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00009 TOXAPHENE EMULSIFIABLE CONCENTRATE

00029 TOXAPHENE EMULSIFIABLE CONCENTRATE (CONTAINS 8 LBS. TOXAPHENE)

00033 COTTON &amp; PEANUT DUST 20-40 TOXAPHENE SULPHUR

00034 PEAS AND VEGETABLE DUST

00059 SULPHENE

00135 PARAPHENE 8-2 TOXAPHENE-METHYL PARATHION

00148 PEE GFE 6-2 TOXAPHENE-METHYL PARATHION

00168 SUL-CO-TOX

00183 PEE GFE COTTON SPRAY

00193 SULPHENE WITH COPPER

00197 44 SPECIAL

00200 TOXAPHENE 90%

00203 COTTON BLASTER

00206 TOXAPHENE 20-0 COTTON DUST



(018421

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 001842 TRIANGLE CHEMICAL COMPANY  
BOX 4528  
MACON GA 31208

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00001 TRIANGLE 20-40 TOXAPHENE-SULPHUR DUST  
00036 TRIANGLE TOXAPHENE-6 EMULSIFIABLE CONCENTRATE  
00182 TRIANGLE RANGE SPRAY FOR BEEF CATTLE  
00213 TRIANGLE 10-3.4-70 PEANUT DUST TOXAPHENE-COPPER-SULFUR  
00244 TRIANGLE SUPER CUPER 6-2-1 CONT 6LB TOX 2LB MET PAR 1 LB ETHYL PAR  
00248 TRIANGLE 6-3 TOX - MP  
00253 TRIANGLE "63"  
00259 MP 4X4  
00263 TRIANGLE TOXAPHENE-8 F.C.  
00269 20X TOXAPHENE DUST  
00273 TRIANGLE MIGHTY 10  
00274 TRIANGLE TRI-9

(018711

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 001871 FARMCRAFT, INC.  
8900 S W COMMERCIAL  
TIGARD OR 97223

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00082 FARMCRAFT TOXAPHENE-10

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 001948 NORTHERN STATES LABS  
P.O. BOX 969  
FREMONT NE 68025

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00030 MAL-TOX LIVESTOCK SPRAY &amp; DIP AN EMULS CONC OF MALATHION &amp; TOXAPHENE

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 001990 FARMLAND IND., INC.  
C/O REGULATORY AFFAIRS DEPT.  
P. O. BOX 7305  
KANSAS CITY, MO 64116

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00015 TOXAPHENE EMULSIFIABLE CONC  
00156 CO OP BEEF CATTLE SPRAY EMULSION CONCENTRATE



(01990)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*CONTINUE REGISTRANT 001990

00346 CO-OP STOCK-TOX PLUS LINDANE

\*REGISTRANT\*

\*NAME AND ADDRESS\*

GRACE W & C COMPANY AGR CHEM C H TIDWELL  
PO BOX 277 100 N MAIN ST  
MEMPHIS TN 38101

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00265 NACO TOXAPHENE + 1 1/2% PARATHION DUST

00521 NACO TOXAPHENE-SULPHUR 20-40 DUST

00578 NACO 20% TOXAPHENE DUST

00630 NACO SUPER TEN

00752 NACO TOXAPHENE 6 EC

00762 NACO TOXAPHENE PARATHION 20-2 DUST

00770 NACO TOXAPHENE 40-W

00775 NACO TOXAPHENE 8-E

00784 NACO TOXAPHENE-METHYL PARATHION 6-3EC

(02136)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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38

\*REGISTRANT\*

\*NAME AND ADDRESS\*

HOFMAN COMPANY INC  
1413-1415 COURT ST LAB  
ALLENTOWN PA 18102

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00016 HOFMAN'S LOUSE AND MANGE SPAY

\*REGISTRANT\*

\*NAME AND ADDRESS\*

PATTERSON CHEMICAL COMPANY INC  
1400 UNION AVE  
KANSAS CITY, MO 64101

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00100 PATTERSON'S BAG WOMM SPAY

00134 PATTERSON'S TURF INSECT KILLER EMULSIFIABLE CONCENTRATE

00158 PATTERSON'S TOXAPHENE-LINDANE

00245 BAGWORM AND SOD WORMS SPRAY 60% TOXAPHENE



FEDERAL REGISTER, VOL. 42, NO. 101—WEDNESDAY, MAY 25, 1977

0022691 \*\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\* REGISTRANT\* NAME AND ADDRESS\*

\* 002269 GOLD KIST INC  
PO BOX 2210  
ATLANTA GA 30301

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00010 20-40 TOXAPHENE COTTON DUST

00019 CD-OP 202 TOXAPHENE COTTON DUST

00120 COTTON SAVER

00130 CPA/GK BUG DUG

00132 CPA-GK DOUBLE TROUBLE

00147 GK 5-3 SPRAY

00156 TOXAPHENE 8-F

00157 GOLUKIST TOXAPHENE EMULSIFIABLE CONCENTRATE

00159 GK 8-2 SPRAY

00166 TOXAPHENE MALATHION ULV INSECTICIDE FOR COTTON

\*\*\*\*\*

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*REGISTRY# NAME AND ADDRESS\*

\* 002217 PRI-GORDON CORPORATION  
300 SO 3RD ST  
KANSAS CITY KS 65118

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00026 TOXAPHENE EMULSIFIABLE CONC  
00242 STOCK-TOX PLUS LIVESTOCK SPRAY CONC.)  
00288 GORDON'S BAGWORM SPRAY FOR EVERGREENS  
00300 TOXAPHENE BACK RUBBER CONCENTRATE  
00301 HI-TOX LIVESTOCK SPRAY EMULS. CONC.  
00324 GORDON'S SUPERKILL 50D WORM KILLER SPRAY  
00339 HI-TOX M LIVESTOCK SPRAY CONCENTRATE  
00350 RUB TOX 65 BACKRUBBER CONCENTRATE  
00421 TOXAPHENE LAMP AND ORNAMENTAL SPRAY  
00482 NEW IMPROVED #76 50D WORM KILLER



26898

## NOTICES

(02301)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 002301 TFFHUNE C D COMPANY  
BOX 333  
CEPARTOWN GA 30125

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00004 SUPER COTTON DUST CONTAINS 20% TOXAPHENE

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 002342 KERR-MCGEE CHEMICAL CORP  
MGR PKG & LABELING  
KERR-MCGEE CENTER  
OKLAHOMA CITY OK 73102

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00026 FASCO 20-40 COTTON DUST

00598 FASCO MOLE CRICKET BAIT

00707 FASCO TERPENE-METHYL PARATHION 8-2 EC (TOXAPHENE-METHYL PARATHION)

00711 FASCO FAS-KIL COTTON &amp; SOYBEAN INSECTICIDE SPRAY

00717 FASCO TOXAPHENE DUST-10

00741 FASCO TOXAPHENE PARATHION DUST 10-2

00742 FASCO TOXAPHENE LIQUID 8

00743 FASCO TOXAPHENE 40-WP

00773 FASCO TOX-MP 4-4EC COTTON &amp; SOYBEAN INSECTICIDE SPRAY

00781 20% TOXAPHENE DUST

(02342)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

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\*\*CONTINUE REGISTRANT 002342

00783 TOXAPHENE COTTON DUST

00786 TOXAPHENE EMULSIBLE CONCENTRATE

00895 FASCO TOXAPHENE-SULFUR DUST 20-40

00896 FASCO TOXAPHENE DUST 20

00936 FASCO TERPENE PARATHION 4-1EC

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 002353 HOPKINS AGRI. CHEMICAL CO.  
P.O. BOX 7532  
MADISON, WI. 53707

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00227 HOPKINS 10% TOXAPHENE GRANULAR INSECTICIDE

00276 HOPKINS TOXAPHENE 6 E.C.

00332 ALLIED CHEMICAL 90% TOXAPHENE

00334 ARCADIAN TOXAPHENE EM-6 EMULSIFIABLE CONCENTRATE

\*\*\*\*\*



(02435)

\*\*\* PRODUCT SEARCH LISTING \*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 002435 HYDE RA OIL COMPANY  
PIPESTONE MN 56154

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00004 HYDE TOXAPHENE BEEF CATTLE CIL RUB

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 002459 STEVENS IND INC  
N MAIN ST PO BOX 272  
DAWSON GA 31742

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00004 MASTER BRAND TOXAPHENE

00005 MASTER BRAND 20-40 TOXAPHENE WITH SULPHUR

00030 MASTER EMULSIFIABLE SPRAY FOR COTTON

00113 MASTER BRAND RANGE SPRAY

00117 MASTER BRAND 20% TOXAPHENE DUST FOR LAWNS AND GARDENS

00220 MASTER BRAND TOX. - M. PARATHION

00246 MASTER BRAND 2.5% METHYLPARATHION-20% TOXAPHENE DUST

00250 MASTER BRAND TOXAPHENE DUST FOR LAWNS &amp; GARDENS

00259 MASTER BRAND EMULSIFIABLE SPRAY TOXAPHENE

(02460)

\*\*\* PRODUCT SEARCH LISTING \*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 002460 HOWERTON GOWEN COMPANY INC  
BOX 247 W 11TH ST  
ROANOKE RAPIDS NC 27870

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00006 20% TOXAPHENE COTTON DUST

00007 GOWEN'S 20% CHLORINATED CAMPHENE COTTON DUST WITH 40% SULPHUR

00053 GOWEN'S 20 COTTON SPRAY

00054 GOWEN'S 6-3 EMULSIFIABLE INSECTICIDE CONCENTRATE

00055 GOWEN'S 6-1 1/2 EMULSIFIABLE LIQUID

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 002724 ZORCON INDUSTRIES, INC.  
12205 DENTON DRIVE  
DALLAS, TX 75234

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00052 LINTOX-X

00054 LINTOX-M LIVESTOCK SPRAY &amp; DIP BACK RUBBER CONC

00157 STARBAR HOG MANGE AND LICE SPRAY

00161 STARBAR VAPOR-TOX LIVESTOCK SPRAY AND DIP BACK RUBBER CONCENTRATE

00164 STARBAR LINTOX-M DUST

00165 STARBAR LINTOX LIVESTOCK DUST



1029171

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 002917 CARTER INSEC & CHEMICAL COMPANY INC  
PO BOX 127  
TEACHEY, NC 28464

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00019 CARTER CAROLINA BRAND 10% TOXAPHENE DUST

00043 CARTER CAROLINA BRAND TOXAPHENE EMULSION CONCENTRATE

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 002935 WILBUR ELLIS CO.  
P. O. BOX 1286  
FRESNO, CA 93715

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00376 RED TOP TOXAPHENE 8 SPRAY

00381 RED-TOP TOXAPHENE 40 WP

1029741

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 002974 COAHOMA CHEMICAL COMPANY DIV RIVERSIDE CHEMICAL CO  
P O BOX 171199  
MEMPHIS TN 38117

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00002 RED PANTHER TOXAPHENE 6 LB. EMULSIFIABLE CONCENTRATE

00105 RED PANTHER TOXAPHENE MP EMULSIFIABLE CONCENTRATE

00110 RED PANTHER 6-3 TOXAPHENE-MP EMULSIFIABLE CONCENTRATE

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 003122 SUPERIOR FERTILIZER & CHEM COMPANY ATTN R BASS  
BOX 1021  
TAMPA FL 33600

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00016 COTTON DUST, 20% TOXAPHENE - 40% SULPHUR



(032381)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 003238 AGRICOL CHEMICAL CO.  
CROP PROTECTION CHEMICAL DIV.  
BOX 3451  
TULSA, OK 74101

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00037 STANDARD BRAND TOXAPHENE-SULPHUR 20-40 DUST AN AGRIC. INSECT. FUNG  
00058 STANDARD BRAND TOXAPHENE 8-EC INSECTICIDE  
00059 STANDARD BRAND TOXAPHENE 6EMULSIFIABLE CONCENTRATE INSECTICIDE  
00060 STANDARD BRAND TOXAPHENE-METHYL PARATHION 5-3 EC INSECTICIDE  
00062 TOXAPHENE METHYL-ETHYL PARATHION 6-2-1 EMULSIVE COTTON SPRAY INSECT  
00067 TOXAPHENE-METHYL PARATHION 4-4 EMULSIVE COTTON SPRAY INSECTICIDE  
00072 STANDARD BRAND TOXAPHENE METHYL PARATHION 6-1 1/2 EC INSECTICIDE

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 003342 CAPE FEAR CHEMICALS INC  
PO BOX 595  
ELIZABETHTOWN NC 28337

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00067 TIGER BRAND TOXAPHENE  
00084 10X TOXAPHENE DUST

(03442)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 003442 USS AGRI-CHEMICALS DIV US STEEL CORP  
PO BOX 1585  
ATLANTA GA 30301

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00682 USS TOXAPHENE 6 EC DELTA  
00683 USS TOXAPHENE 6 EC  
00684 USS METHYL PARATHION-TOXAPHENE 4-4-EC  
00685 USS METHYL PARATHION-TOXAPHENE 4-4 EC DELTA  
00686 USS METHYL PARATHION-TOXAPHENE 3-6 EC DELTA  
00687 USS METHYL PARATHION TOXAPHENE 3-6 EC

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 003468 SCHALL CHEMICAL INC  
BOX 862  
MONTEVISTA CO 81144

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00005 SCHALL LIVESTOCK SPRAY, DIP & OILER CONC.



26902

## NOTICES

(03509)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*REGISTRANT\*

## \*NAME AND ADDRESS\*

\* 003509      SAFF WAY FARM PRODUCTS COMPANY  
              2519 E FIFTH ST  
              AUSTIN TX 78702

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00050    SILVERTOX BEEF ANIMAL - SHEEP AND GOAT LIVESTOCK SPRAY  
00100    TOX O'MAL #45  
00101    SAFFWAY LIVESTOCK DUST  
00116    TOXAPHENE-6 EMULSIFIABLE

\*\*\*\*\*  
\*REGISTRANT\*

## \*NAME AND ADDRESS\*

\* 003624      NOVA PRODUCTS INC  
              PO BOX 5086  
              KANSAS CITY KS 66119

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00095    NOVA TOXAPHENE - 6 E  
00143    NOVA CATTLE BACKRUBBER CONCENTRATE

(03743)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*REGISTRANT\*

## \*NAME AND ADDRESS\*

\* 003743      SOUTHERN AGRICULTURAL CHEMICALS INC  
              PO BOX 527  
              KINGSTREE SC 29556

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00141    ROYAL BRAND LIVESTOCK SPRAY  
00193    101 BRAND CABBAGE DUST  
00226    20X TOXAPHENE DUST  
00233    ROYAL BRAND TOXAPHENE 60 EMULSION CONCENTRATE  
00262    COTTON-TOX 62  
00292    ROYAL BRAND BEAN TOX 82  
00293    2-5-20 CABBAGE DUST  
00299    COTTON-TOX 82  
00317    ROYAL BRAND CY-TOX ULV  
00318    40W TOXAPHENE  
00322    COTTON TOX MP 6-1.5  
00323    COTTON-TOX-MP 6-3  
00326    TOX-GUARD 9  
00327    CY-TOX EC  
00328    ROYAL BRAND 8-2 CY-TOX E.C.  
00330    3.96-0.99 TOXAPHENE-METHYL PARATHION ULV  
00332    ROYAL BRAND LIVESTOCK DUST



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00535 TOXAPHENE-METHYL PARATHION  
00484 TOXAPHENE SEVIN 14-7 DUST  
00482 TOXAPHENE SEVIN METHYL PARATHION COTTON DUST  
00480 TOXAPHENE METHYL PARATHION 4-4 E.C.  
00470 WHOPPER KNOCKER  
00414 TOXAPHENE-METHYL PARATHION 6-3 EMULSION CONCENTRATE  
00112 SMITH-DOUGLASS TOXAPHENE OILER SOLUTION  
00108 ZOK TOXAPHENE DUST  
00105 SMITH DOUGLASS 6 LBS TOXAPHENE EMULSION CONC  
00104 SMITH DOUGLASS TOXAPHENE PARATHION DUST (ZOK TOXAPHENE 2E PARATHION)

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

\* 00415  
SMITH-DOUGLASS DIV.  
BORDEN CHEMICAL, BORDEN INC.  
5100 VIRGINIA BEACH BLVD.  
NORFOLK, VA 23501  
\*\*\*\*\*  
\*\*\*\*\* NAME AND ADDRESS \*\*\*\*\*

00002 OLD SCATCH CONCENTRATED LINDANE - TOXAPHENE

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

\* 00403  
OLD SCATCH INC OF AMARILLO  
PO BOX 5058  
AMARILLO TX 79107  
\*\*\*\*\*  
\*\*\*\*\* NAME AND ADDRESS \*\*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

(04030)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

00264 DAY TOX  
00255 10X TOXAPHENE GRANULES CORN BORER CONTROL  
00251 ECONOMY TOXAPHENE CROP & LIVESTOCK SPRAY CONCENTRATE  
00246 STOCK TOX EMULS. TOXAPHENE INSECTICIDE LIVESTOCK & UTILITY SPRAY  
00245 STOCK TOX V TOXAPHENE PLUS YAPONA (EMULSIFIABLE INSECTICIDE  
00185 MALATIX LIVESTOCK SPRAY & DIP  
00168 ECONOMY SE TOXAPHENE BACKUPPING SOLUTION  
00119 ECONOMY STOCK-TOX PLUS  
00070 ECONOMY RANGE CATTLE SPRAY

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

\* 00370  
ECONOMY PROD COMPANY  
BOX 427  
SHEMANDAH IA 51601  
\*\*\*\*\*  
\*\*\*\*\* NAME AND ADDRESS \*\*\*\*\*

00335 ROYAL BRAND BOLL MAKER

\*\*\*\*\* CONTINUE REGISTRATION 003743

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(03743)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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(04185)

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REC'D INJF REGISTANT 004185

00528 78UMP

\*REGISTRATION\*  
\*NAME AND ADDRESS\*

PERNATA CORP AGCHEW OIA.  
PERNATAI TECHNOLOGICAL CENTER  
P.O. BOX C  
KING OF PRUSSIA, PA 19405

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
00015 20-0 COTTON DUST (CONTAINS 20% TOXAPHENE)

00105 114570K 50844 M-7

00265 PENSALT B\*2 SPAY

\*REFUGIANTS\* \*NAME AND ADDRESS\*

CCFQADQ INTERNATIONAL CORP  
5321 DAHLIA ST  
COMMERCIAL CITY CO 80022

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00145 BEST 4 SPRAYS BRAND TOXACANE READY MIXED OIL FR COMPOUND

00148 BEST &amp; SERRIS BRAND TOXAMAL LIVESTOCK CONCENTRATE AND OI

00149 PEST &amp; SPRAYS BRAND HIGH STRENGTH PROTEX TOXADANE

00191 BF 57 4 SERVIS BRAND TOXAPHENE READY MIXED OILER COMPOUND

00152 BEST & SEARIS BRAND TECH CHLORINATED CAMPHENE FOR MANUF. ONLY

(0475)

\*\*\* PRODUCT SEARCH LISTING \*\*\*

03/08/77

REC'D NTMUF REGISTRATION 004715

00153 RPT 4 SFRVIS BRAND TECHNICAL TOXAPHENE FOR MFG. PURPOSES ONLY

00176 RFST &amp; SERVIS BRAND PROTEK TOXAPHENE

00178 B-57 &amp; SEVVIS BRAND TOXAPHENE 8 LB. EMULSIFIABLE CONCENTRATE

00236 BEST & SFRSIS BRAND PROTEX TOX LIVESTOCK SPRAY EMULSIFIABLE CONC

00253 BFT &amp; SEVITS BRAND TOXAPHENE CROP CONTROL

00281 BEST 4 SEALS BRAND EVERGREEN SPRAY CONTAINS KETANE AND TOXAPHENE

00303 BEST 4 SEAVIS BRAND 8 LB TOXAPHENE OIL SOLUTION

00305 BEST 4 SEALS BRAND TOXAPHENE CROP AND LIVESTOCK SPRAY CONCENTRATE

00314 BEST 4 SEVTS BRAND 6 LB TOXAPHENE OIL SOLUTION

\*REGISTRANT\* \*NAME AND ADDRESS\*

CHEMICAL INDUSTRIES INC

BOGGER TX 79007

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00040 HERRFORD BRAND METHYL PARATHION TOXAPHENE 3-5 E

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(04941)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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## \*REGISTRANT\* \*NAME AND ADDRESS\*

\* 004841 MICRO-CHEM COMPANY  
BOX 711  
WINNABORO LA 71295

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00017 MICRO BLEND SIX POUND TOXAPHENE EMULSIFIABLE CONCENTRATE  
00055 MICRO BLEND MICRO-TOX 63  
00056 MICRO BLEND MICRO-TOX 82

\*\*\*\*\*

## \*REGISTRANT\* \*NAME AND ADDRESS\*

\* 004876 AG SUPPLY INC  
INDUSTRIAL DRIVE  
HOPKINSVILLE KY 42240

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00021 CABLE-OIL OR LIVESTOCK SPRAY  
00022 TOXAPHENE EMULSION  
00048 BAGWORM AND TENT CATERPILLAR SPRAY

\*\*\*\*\*

(04931)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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## \*REGISTRANT\* \*NAME AND ADDRESS\*

\* 004931 GOOD-LIFE CHEMICALS INC  
BOX 687  
EFFINGHAM IL 62401

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00056 NEW! GOOD-LIFE BAG WORM SPRAY  
00069 GOOD-LIFE BAG WORM LIQUID

\*\*\*\*\*

## \*REGISTRANT\* \*NAME AND ADDRESS\*

\* 005481 ANVAC CHEMICAL CORP  
4100 EAST WASHINGTON BLVD  
LOS ANGELES, CA 90023

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00071 ALCO L-T STOCK SPRAY  
00141 DURHAM DURATHION ZEENATE TOXAPHENE DUST 2-6-15  
00143 DURHAM DURATHION TOXAPHENE SULFUR DUST 2-10-50  
00162 ALL PURPOSE ORNAMENTAL SPRAY  
00173 TOXAPHENE BE AGRICULTURAL INSECTICIDE EMULSIFIABLE LIQUID

\*\*\*\*\*



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## NOTICES

(05549)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 005549 COASTAL CHEMICAL CORPORATION  
PO BOX 856  
GREENVILLE NC 27834

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00058 COASTAL TMP 8-2  
00061 20% TOXAPHENE DUST  
00062 TOXAPHENE EMULSION\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 005778 GRO CHEMICAL COMPANY  
3530 NW 31ST ST  
MIAMI FL 33142

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00026 GRO TOXAPHENE 60% CONCENTRATED EMULSION  
00032 SUPER CHINCH LAWN SPRAY WITH BHC-TOXAPHENE-DIAZINON  
00034 SUPER CHINCH LAWN SPRAY WITH BHC TOXAPHENE-ETHION  
00035 SUPER CHINCH LAWN SPRAY WITH BHC-TOXAPHENE-TRITHION

(05905)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 005905 HELENA CHEMICAL CO  
CLARK TOWER, 5100 POPLAR AVE, SUITE 2904  
MEMPHIS TN 38137

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00056 HELENA BRAND 6 LB. TOXAPHENE EMULSIFIABLE INSECTICIDE CONCENTRATE  
00080 HELENA BRAND HELS-MATE 8 TOXAPHENE-2 METHYL PARATHION  
00120 HELENA BRAND 4 TOX-4 METHYL  
00138 TOXAPHENE MALATHION LIVESTOCK SPRAY  
00172 HELENA BRAND TOXAPHENE 10% GRANULAR INSECTICIDE  
00183 HELENA BRAND GUNTER 6-3 EMULSIFIABLE INSECTICIDE CONC  
00185 HELENA BRAND 20-0 TOXAPHENE DUST  
00186 HELENA BRAND 15% TOXAPHENE GRANULAR INSECTICIDE  
00191 HELENA 6 TOX-2 EPN  
00192 HELENA BRAND 6LB TOXAPHENE(AGRICULTURAL EMULS. LIO.)  
00195 HELENA TRIPLE KILL T  
00205 TOXAPHENE 6I LIVESTOCK DIP AND SPRAY  
00208 HELENA TOXAPHENE MALATHION LIVESTOCK SPRAY & DIP INSECTICIDE CONCENTRATE  
00214 HELENA BRAND 6 TOX-3 ETHYL EMULSIFIABLE INSECTICIDE CONCENTRATE  
00215 HELENA BRAND 4 TOX 4 ETHYL EMULSIFIABLE INSECTICIDE CONCENTRATE  
00223 HELENA BRAND 5 TOX -1.5 METHYL  
00236 HELENA BRAND TOXAPHEN SPRAY 8-E



1059051

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*CONTINUE REGISTRANT 005905

00241 HELENA BRAND 6-2-1 TOX-METHYL-ETHYL EMULSIFIABLE INSECTICIDE CONCENTRATE  
00249 HELENA BRAND SLAYER III  
00263 HELENA ANIMAL HEALTH TOX-A-CHLOR  
00290 HELENA 20% TOXAPHENE-40% SULPHUR DUST  
00291 HELENA AG CHEM 20% TOXAPHENE DUST  
00325 HELENA SULF-D-TOX  
00335 PT-35 EMULSIFIABLE LIQUID  
00336 HELENA PARATHION TOXAPHENE 24 AN EMULSIFIABLE LIQUID  
00344 HELENA HFL-TOX 32 EMULSIFIABLE LIQUID  
00346 HELENA HFL-CHEM-4  
00348 HEL-CHEM 62 EMULSIFIABLE LIQUID  
00356 HELENA TOXAPHENE B-E  
00357 HELENA AG CHEM TOXAPHENE 6-E AN EMULSIFIABLE LIQUID  
00359 HELENA AG CHEM 10% TOXAPHENE -3.4% COPPER 70% SULPHUR DUST  
00366 HELENA BRAND 4-2-5 EMULSIFIABLE INSECTICIDE CONCENTRATE  
00367 HELENA 4-2-1 EMULSIFIABLE INSECTICIDE CONCENTRATE

1059679

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 005967 MOYER CHEMICAL COMPANY  
BOX 945  
SAN JOSE CA 95108

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00082 METAPHENE  
00095 TOXAPHENE SPRAY B-E  
00096 TOXAPHENE 40-W

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 006079 NORTH LOUISIANA CHEMICALS INC  
PO BOX 127  
GILLIAM LA 71029

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00007 TOXAPHENE EMULSIFIABLE CONCENTRATE  
00011 EIGHT-TWO  
00012 SIX-THREE TOXAPHENE-METHYL PARATHION



26908

## NOTICES

1065521

\*\*\* PRODUCT SEARCH LISTING \*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 006552 KAY OFF FEED COMPANY  
1919 GRAND AVENUE  
SIOUX CITY IA 51107

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00005 KAY OFF TOX IT (LIVESTOCK SPRAY CONCENTRATE)

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 006720 SOUTHERN HILL CREEK PRODUCTS COMPANY INC  
BOX 1096  
TAMPA FL 33601

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00100 X-CEL CUT WORM BAIT

00218 TOXAPHENE BE

106735

\*\*\* PRODUCT SEARCH LISTING \*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 006735 TIDE PRODUCTS INC  
ATTN HW MAPSH BOX 1020  
EDINBURG TX 78539

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00132 TIDE MP-TOX

00133 TIDE METHYL PARATHION-TOXAPHENE-2-4E

00170 TIDE TOXAPHENE-SULFUR 20-40 DUST

00180 TIDE TOXAPHENE 20 DUST

00187 TIDE COPPER-TOXAPHENE SULFUR 3.4-20-40

00190 TIDE TOXAPHENE 6-E EMULSIFIABLE LIQUID

00198 MP-TOX-44

00218 TIDE EXPANDER EMULSIFIABLE LIQUID-AGRICULTURAL INSECTICIDE

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*\* 007001 OCCIDENTAL CHEMICAL CO  
P O BOX 198  
LATHROP, CA 95330

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00070 BEST LIVESTOCK SPRAY CONTAINS TOXAPHENE AND LINDANE

00110 TOXAPHENE B EC

00153 MP TOX 2-B AQUAMUL



007001 \*\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*\*  
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## \*\*CONTINUE REGISTRANT 007001

00182 MALATHION TOXAPHENE 2-6EC  
00195 METHYL PARATHION TOXAPHENE 3-6  
00199 BEST TOXAPHENE 6EC

\*\*\*\*\*  
\*\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 007056 CHEM SPRAY AEROSOLS INC  
P.O. BOX 38073 16210 FARM RD 149  
HOUSTON TX 77088

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
00072 CHEM-TOX TOXAPHENE MALATHION LIVESTOCK SPRAY & DIP

\*\*\*\*\*  
\*\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 007173 CHEMPAR CHEMICAL COMPANY INC  
260 MADISON AVE  
NEW YORK NY 10016

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
00034 CHEMPAR TOXAPHENE 60X LIQUID

007273 \*\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*\*  
03/08/77 FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE PAGE 64

\*\*\*\*\*  
\*\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 007273 CROWN CHEMICAL INCORPORATED  
4995 NORTH MAIN STREET  
ROCKFORD IL 61101

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
00087 CHECK PEST BAGWORM MITE SPRAY  
00092 CHECK-PEST T-6 TOXAPHENE

\*\*\*\*\*  
\*\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 007401 VOLUNTARY PURCHASING GROUP INC  
PO BOX 460  
RONHAM TX 75418

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
00167 HI-YIELD KILLIZALL 44  
00199 HI-YIELD RANGE CATTLE SPRAY CONTAINING MALATHION  
00207 HI-YIELD 610 TOXAPHENE EMULSIFIABLE CONC  
00227 HI YIELD 4-2 MIX  
00230 HI-YIELD 615  
00248 FERTI-LONE BAGWORM KILLER  
00269 HI-YIELD 818 TOXAPHENE  
00272 HI-YIELD LIVESTOCK SPRAY NO 1  
00276 HI-YIELD LIVESTOCK SPRAY NO. 2



(074C1)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*\*CONTINUE REGISTRANT 007401

00281 MT-YIELD TOXAPHENE 6 F.C.

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 007794 RED BARN CHEMICALS INC  
520 SOUTH CINN  
TULSA OK 74102

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00053 RED BARN TOXAPHENE-METHYL PARATHION 6-3 EMULSIFIABLE CONCENTRATE

00054 RED BARN METHYL PARATHION TOXAPHENE 505

00055 RED BARN METHYL PARATHION TOXAPHENE 4-4 EMULSIFIABLE CONCENTRATE

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 008006 EASY CHEMICAL & MFG COMPANY INC  
R R 1  
SEWARD NE 68434

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00011 EASY CATTLE OIL FORMULA NO. 1

(08152)

\*\*\* PRODUCT SEARCH LISTING \*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 008152 GALCO COMPANY  
BOX A  
COUNCIL BLUFFS IA 51501

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00004 GALCO BEFF CATTLE OIL

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 008222 LING FUANG INDUSTRIES, INC.  
LING FUANG, IND.  
P.O. BOX 1207  
GARDNERVILLE, NV. 89410

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00027 TRIPLE ACTION LAWN WEED & FEED MOTH INSECTICIDE

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 008343 GABRIEL CHEMICALS LTD  
204 21ST AVE  
PATERSON, NJ 07509

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00062 AGRISFCT CUTWORM BAIT



(08461) \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*  
03/05/77 FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE PAGE 67

\*\*\*\*\*  
\*\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 008461 CYPRESS SUPPLY COMPANY  
8123 OFLMAR BLVD  
ST. LOUIS, MO 63130

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
00018 CYPRESS BRAND TOXAPHENE 6-E

\*\*\*\*\*  
\*\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 008521 GABRIEL CHEMICAL LTD  
BOX 8  
ROBBINSVILLE NJ 08691

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
00073 TOXAPHENE 60% EMULSIFIABLE CONCENTRATE

\*\*\*\*\*  
\*\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 008590 AGWAY INC  
CHEMICAL DIV BOX 1333  
SYRACUSE NY 13201

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
00013 TOXAPHENE 6E  
00113 TOXAPHENE PARATHION 10-1 D

(08620) \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*  
03/08/77 FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE PAGE 68

\*\*\*\*\*  
\*\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 008620 ESCAMBIA CHEMICAL CORP  
PO BOX 467  
PENSACOLA FL 32502

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
00035 BIG BOY COTTON DUST 20% TOXAPHENE 40% SULPHUR  
00041 BIG BOY TRIPLE THREAT 6-2-1

\*\*\*\*\*  
\*\*REGISTRANT\* \*NAME AND ADDRESS\*  
\* 008648 STAPLE COTTON SERVICES ASSOCIATION  
210 W MARKET ST  
GREENWOOD MS 38930

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*  
00025 STAPLE COTN BRAND 8-2 TOXAPHENE - METHYL PARATHION  
00027 TOXAPHENE 6 E. C. INSECTICIDE  
00028 6-1.5 TOXAPHENE METHYL PARATHION



(098671) \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\* REGISTRANT \*\*\*\*\*

\* 008867 CLEVELAND FEN CO

BOX 510

CLEVELAND MS 38132

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00009 CCC BRAND 6 LB. TOXAPHENE EMULSIFIABLE INSECTICIDE CONCENTRATE

00028 INSECT-A-KILL 63

00030 INSECT-A-KILL TOXATHION 82 EMULSIFIABLE INSECTICIDE CONCENTRATE

00031 INSECT A KILL 615

\*\*\*\*\* REGISTRANT \*\*\*\*\*

\* 008934 RING AROUND PRODUCTS INC

PO BOX 569

MONTGOMERY AL 36101

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00020 RING AROUND BRAND TOXAPHENE 5#

00070 RING AROUND BRAND SUPER SYTEM

00071 RING AROUND BRAND SYTEM 233

00078 RING AROUND PARA TOX 4-4

00079 RING AROUND PARA TOX 4-3

00081 RING AROUND BRAND PARA-TOX 5-2

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\* REGISTRANT \*\*\*\*\*

\* 009020 WARREN OIL COMPANY

727 S 13TH ST

OMAHA NE 68102

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00004 GOLD BOND BLACK RUBBER OIL (CONT TOXAPHENE)

\*\*\*\*\* REGISTRANT \*\*\*\*\*

\* 009114 ALLIED MILLS

110 NORTH WACKER DRIVE

CHICAGO, IL 60606

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00012 WAYNE HOG MANGE CURF

00014 WAYNE SUPER 1 &amp; L LIVESTOCK SPRAY



## NOTICES

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1091593

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 000159 KAISER AGRICULTURAL CHEMICALS  
PO BOX 246  
SAVANNAH GA 31402

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00002 KAISER AGRICULTURAL CHEMICALS TOXAPHENE 6E  
00091 PEANUT DUST TOXAPHENE, COPPER SULPHUR  
00103 KAISER AGRICULTURAL CHEMICAL 20X TOXAPHENE DUST

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 000275 BERRIEN PRODUCTS COMPANY INC  
BOX 355  
NASHVILLE GA 31639

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00006 BERRIEN 20-0 TOXAPHENE DUST  
00007 BERRIEN 20-40 TOXAPHENE DUST

1093561

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 000356 KOINZAN SEED & FLYING SERVICE INC  
ELGIN, NB 68636

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00001 TOXAPHENE BACKRUBBER OIL

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 009404 CHASE & COMPANY  
BOX 1697  
SANFORD FL 32771

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00023 SUNNILAND WORM SPRAY CUT WORMS AND ARMY WORMS

\*\*\*\*\*  
\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 009779 RIVERSIDE CHEM COMPANY  
P.O. BOX 171199 855 RIDGE LAKE BLVD  
MEMPHIS TN 38117

## \*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00020 RIVERSIDE TOXAPHENE 6  
00043 RIVERSIDE 20-40 DUST.



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## NOTICES

{09779}

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*\*CONTINUE REGISTRANT 009779

00054 RIVERSIDE 20% TOXAPHENE 1% METHYL PARATHION DUST  
 00070 RIVERSIDE 20% TOXAPHENE DUST  
 00117 RIVERSIDE MET-A-TOX  
 00132 RIVERSIDE TOXON 82 METHYL PARATHION MIXTURE  
 00134 RIVERSIDE 63  
 00159 KILL A PLENTY TOXAPHENE 6-EC  
 00184 RIVERSIDE BRAND TOXON 81  
 00185 RIVERSIDE TORRIDAN 28  
 00189 RIVERSIDE TOXON 44  
 00217 RIVERSIDE T-90  
 00241 DH 20% TOXAPHENE 2% PARATHION DUST

\*\*\*\*\*  
 \*REGISTRANT\* \*NAME AND ADDRESS\*

\* 009782 WOODBURY CHEMICAL COMPANY  
 PO BOX 4319  
 PRINCETON FL 33030

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00008 WOODBURY TOXAPHENE 8-E

{10004}

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*  
 \*REGISTRANT\* \*NAME AND ADDRESS\*

\* 010004 H E H FARM SERVICE  
 BOX 435  
 MILLEDGEVILLE IL 61051

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00001 FORMULA NO. 1 OLD SCRATCH CATTLE OIL

\*\*\*\*\*  
 \*REGISTRANT\* \*NAME AND ADDRESS\*

\* 010107 CORN BELT CHEMICAL COMPANY  
 PO BOX 61  
 MCCOOK, NE 69001

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00011 TOXAPHENE E-6

\*\*\*\*\*  
 \*REGISTRANT\* \*NAME AND ADDRESS\*

\* 010159 VOLUNTARY PURCHASING GROUPS INC  
 P O BOX 460  
 BONHAM, TX 75418

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00001 HT-YIELD KILLZALL 63



## NOTICES

26915

(10123)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

PAGE

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\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 010163 GOWAN COMPANY  
P.O. BOX 5656  
YUMA, AZ 85364

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00012 PROKIL TORRIDAN 28  
00047 PROKIL TOXPHENE 8 EC

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 010411 PULVATR CORP  
4599 BIG CREEK CHURCH RD  
MILLINGTON, TN 38053

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00002 METHYL TOX T

\*\*\*\*\*

(10413)

## \*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

03/08/77

FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 010413 SONFORD CHEMICAL COMPANY  
5433 KATY FREEWAY  
HOUSTON, TX 77024

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00005 CLORCHEM T-590  
00006 CLORCHEM T-590K  
00007 TOATOX  
00009 TOATOX-K

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 010536 MIKE INC DIV OF SOUTHERN AGRICULTURAL CHEMICAL  
P O DRAWER 527  
KINGSTREE SC 29556

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00002 101 BRAND 2-20 CABBAGE DUST

\*\*\*\*\*



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## NOTICES

(10025)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 010025      WILLIGHT CHEMICAL COMPANY  
                  PO BOX 254  
                  DRFW MO 38737

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00002      TOP DOG 6 LB. TOXAPHENE EMULSIFIABLE INSECTICIDE CONCENTRATE

00006      TOP DOG BRAND 6LB TOXAPHENE 3LB METHYL PAR.

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 010073      TIFTON CHEMICAL COMPANY  
                  PO BOX 5  
                  TIFTON GA 31794

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00007      TIFCHEM 1-2-6 COTTON SPRAY

00008      TIFCHEM 4-4 COTTON SPRAY

00010      TIFCHEM TOXAPHENE EM-6

00011      TIFCHEM 6-3 COTTON SPRAY

00016      TIFCHEM TOXAPHENE 20-SUL 40 COTTON DUST

00021      TIFCHEM 20% TOXAPHENE DUST

00031      TIFCHEM TOXAPHENE EM-8

00032      6-2 TOXAPHENE-EPN

00033      8-2 COTTON SPRAY

(10073)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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\*\*CONTINUE REGISTRANT 010073

00036      TIFCHEM 1 1/2-1 1/2-6 COTTON SPRAY

00042      TIFCHEM TOXAPHENE 40% WP

00043      TIFCHEM TOXAPHENE 40% DUST

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 011656      WESTERN FARM SERVICE INC SHELL CHEM COMPANY  
                  1025 CONNECTICUT AVE-STE 200  
                  WASH DC 20036

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00011      TOXAPHENE 8-E EMULSIFIABLE LIQUID

00039      WESTERN FARM SERVICE PARATOX 36 INSECTICIDE

00040      WESTERN FARM SERVICE PARATOX 28 INSECTICIDE

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 011670      CALM STOCK CHEMICAL COMPANY  
                  BOX 395  
                  ROCHELLE IL 61068

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00001      CALM STOCK BIG T CATTLE OIL

\*\*\*\*\*

FEDERAL REGISTER, VOL. 42, NO. 101—WEDNESDAY, MAY 25, 1977

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## NOTICES

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(11582)

\*\*\* PRODUCT SEARCH LISTING \*\*\*

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\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 011682 SIMPLOT JR COMPANY MINERALS & CHEM DIV  
BOX 810  
MOUNTAIN HOME ID 83647

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00016 SIM-CHEM TOXAPHENE B-E

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 012062 PRO-BOLL CHEMICAL COMPANY  
PO BOX 54  
CROWVILLE LA 71230

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00001 PRO-BOLL TOX-6 EMULSIFIABLE CONCENTRATE

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 012130 FARM CHEMICALS INC  
PO BOX 456  
ABERDEEN NC 28315

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00003 FARM CHEM TOXAPHENE EC

00004 FARMCHEM 82 TOX-METHYL

(121701)

\*\*\* PRODUCT SEARCH LISTING \*\*\*

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\*CONTINUE REGISTRANT 012130

00007 FARMCHEM 6-3 TOX-METHYL

00008 FARMCHEM 6-4 TOX-METHYL

00015 FARM CHEM TOXAPHENE BF

00035 5-2-1 TOX-ETHYL METHYL

00040 6-2-1 TOX-ETHYL METHYL

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 012434 SPRINGBOK CHEMICAL COMPANY INC  
P O BOX 398  
PENDLETON, OR 97801

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00001 SPRING BOK BRAND TOXAPHENE B EMULSIVE

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 013166 APOLLO ENTERPRISES INC  
ROUTE 1  
ALTHEIMER AR 72004

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00002 PISTOL 6-3 EMULSIFIABLE INSECTICIDE CONCENTRATE

00004 6 LB TOXAPHENE EMULSIFIABLE INSECTICIDE CONCENTRATE

\*\*\*\*\*



(14651)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 014651 AGRICULTURAL ENTERPRISES ICC  
933 W 6TH ST P O BOX 0  
FREMONT, NE 68025

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00003 HDG & CATTLE DUSTING POWDER CONTAINS TOXAPHENE

00005 AGRI-TOX

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 014775 ASGROW FLORIDA COMPANY  
PO DRAWER D  
PLANT CITY FL 33566

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00004 TOXAPHENE 6 EMULSIVE

00005 ASGROW TOXAPHENE 8 EMULSIVE

00014 PARATHION-TOX 36

00025 TOX-METHYL 4-4 EMULSIVE TOXAPHENE 4-METHYL PARATHION

\*\*\*\*\*

(15575)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 015575 SOUTHLAND AGRICULTURAL CHEMICAL COMPANY  
PO BOX 6207  
MONTGOMERY AL 36106

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00006 SOUTHLAND SUPER KILL 6-3

00013 SOUTHLAND TOXAPHENE EM-6

00015 SOUTHLAND 6-2-1 COTTON SPRAY

\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 027997 ARTES ALPHA INC  
PO BOX 590  
TIPTON, GA 31794

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00001 TOXAPHENE EM-6 EMULSIFIABLE LIQUID

00005 6-3 COTTON SPRAY

\*\*\*\*\*



## NOTICES

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{33439}

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 033439      DELTA PURCHASING FEDERATION  
1606 COMMERCE  
GREENWOOD, MS 38930

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00002      DELTA 6-3

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 033722      TEX AG COMPANY INC  
P O BOX 633  
MISSION, TX 78572

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00001      MISSION BRAND FORTY FOUR

00008      TOXAPHENE 6LB

\*\*\*\*\*

{33555}

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 033955      ACME DIVISION  
PBI GORDON CORP  
300 SOUTH THIRD ST  
KANSAS CITY, KS 66118

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00516      ACME BAGWORM SPRAY

\*\*\*\*\*

\*REGISTRANT\*      \*NAME AND ADDRESS\*

\* 034764      PLATTE CHEMICAL COMPANY  
150 SOUTH MAIN  
GFERMONT, NB 06802

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00015      CLEAN CROP TOXAPHENE 6EC

00027      CLEAN CROP METHYL PARATHION-TOXAPHENE 3-6 EC

\*\*\*\*\*



(39511)

\*\*\*\* PRODUCT SEARCH LISTING \*\*\*\*

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FEDERALLY REGISTERED PRODUCTS CONTAINING TOXAPHENE

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\*\*\*\*\*

\*REGISTRANT\* \*NAME AND ADDRESS\*

\* 039511 VERTAC, INC.  
STE. 3200 CLARK TOWER  
5100 POPLAR AVE.  
MEMPHIS, TN 38137

\*\*\*\*\* PRODUCT NAME \*\*\*\*\*

00003 HELFNA BRAND HELEPHENE AN INSECTICIDAL TOXICANT

00006 WILLOW CREEK TOXAPHENE 90 AN INSECTICIDAL TOXICANT

\*\*\*\*\*

[FR Doc.77-14496 Filed 5-24-77;8:45 am]



WEDNESDAY, MAY 25, 1977

PART V



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# FEDERAL COMMUNICATIONS COMMISSION

## INTERNATIONAL RADIO REGULATIONS

Preparation for General World  
Administrative Radio Conference of  
International Telecommunication Union

Registered  
Federal  
Property



# FEDERAL COMMUNICATIONS COMMISSION

[Docket No. 20271; FCC 77-285]

## INTERNATIONAL RADIO REGULATIONS

Preparation for General World Administrative Radio Conference of International Telecommunication Union; Fourth Notice of Inquiry

Adopted: April 27, 1977.

Released: May 17, 1977.

In the matter of an inquiry relative to preparation for a General World Administrative Radio Conference of the International Telecommunication Union to consider revision of the international Radio Regulations, Docket No. 20271.

1. On November 24, 1976, the Commission adopted a Third Notice of Inquiry in the above entitled matter (FCC 76-1099, No. 43086). It was released on December 6, 1976, and appeared in the FEDERAL REGISTER on December 13, 1976 (41 FR 54309). The period for comments and reply comments has passed.

2. The purpose of the Third Notice of Inquiry was to solicit comments on a proposed International Frequency Allocations Table (Article 5) see 42 FR 11258, February 28, 1977. The comments and reply comments received on the Third Notice of Inquiry are being considered by the Commission and will be dealt with later. In the Fourth Notice of Inquiry, we shall discuss the topics of the small antenna earth stations, several technical regulations, and the emission designator, thus reducing the number of subjects to be considered in the Fifth Notice of Inquiry. This will expedite our preparation for the General World Administrative Radio Conference (GWARC).

### SMALL ANTENNA EARTH STATIONS

3. In the first Notice of Inquiry issued in this docket we solicited "comments or recommendations concerning changes or revisions to the international Radio Regulations which the public believes should be considered by the Commission in developing pertinent U.S. positions". One of the topics which arose in response to that Notice was the use of small diameter earth station antennas.<sup>1</sup> Space systems utilizing these stations can provide communications services which cannot be economically or conveniently provided by terrestrial systems, and already a number of communications systems using the small antennas have been authorized. For example, the Commission has authorized the use of several 4.5 meter antennas for domestic satellite communications to offshore oil drilling platforms, the use of 69 earth stations with 4.5 meter antennas to provide communications to "bush" communities of Alaska, as well as several smaller antennas on a developmental basis. Recently,

we issued a Declaratory Ruling<sup>2</sup> dealing with the use of small antennas with domestic satellites, and have authorized several small antennas pursuant to that decision for the reception of program material distributed by domestic satellites.

4. In addition to the use of small antennas in the Fixed-Satellite Service, other space radiocommunications services are also involved which are substantially different and may require totally different criteria than discussed herein. For instance, small antennas are used in the shipboard terminals served by the MARISAT system providing communications services in the Maritime-Mobile Satellite Service, and are intended to be used in the AEROSAT program to conduct experimental communications in the Aeronautical-Mobile Satellite Service. The United States government is also expected to make frequent use of small diameter antennas. A number of small antennas have been used, and are being used, in the Applications Technology Satellite (ATS-6) and the Communications Technology Satellite (CTS) experimental programs. The U.S. Government Communications Satellite System (USG CSS)<sup>3</sup> utilizes small antenna earth stations and the use of small antennas is included in the proposed Disaster Warning Satellite<sup>4</sup> program.

5. It is apparent that there will be a steady growth in potential uses of small antenna earth stations in all of the space services; however, uncontrolled use of these terminals could have a significant adverse impact on the utilization of the limited spectrum and orbit resource of the geostationary satellite orbit. The long term resource requirements imposed by expected use of small earth terminals and the effects of that use should be treated in the U.S. preparation for the 1979 GWARC. Accordingly, in the Second Notice of Inquiry issued in this docket we solicited comments and supporting technical material with respect to the use of small earth terminals on the following points:

(a) Identification of the communication services and operational characteristics which entail use of small diameter earth station antennas;

(b) Estimates of the volume (in terms of voice channels and/or bit rate, and required rf bandwidth) of the communications services to be provided by means of small earth terminals, and the estimated number of small earth terminals to be used in the provision of such services, including the geographic distribution of the small terminals;

(c) Identification of the typical baseline technical characteristics of the satellite network serving small earth terminals; and

(d) Identification of the preferred frequency bands to be utilized to serve small earth terminals.

Various parties submitted comments, and they have all been considered. Because of space limitations they are not summarized herein; however, they will be noted where appropriate in the following discussion.

6. The diameter of an earth station antenna could affect the interference levels between satellite networks, as well as between terrestrial and earth stations in bands shared by both space and terrestrial radio services. The Carrier to thermal Noise (C/N) ratio obtained at an earth station could also be dependent on the earth station antenna diameter, although the imposition of a Power Flux Density (PFD) limit in certain bands tends to set a limit on the minimum usable size of the earth station antenna. When the diameter of an earth station antenna is reduced, the main beam gain is reduced; however, the sidelobe level of most antennas generally remains unaltered, or increases, with this reduction. It follows that the difference between the main beam gain and the sidelobe level, called the discrimination, generally decreases with the diameter of the antenna. When every other parameter of a receive earth station antenna remains unaltered,<sup>5</sup> a reduction of the antenna diameter generally increases the interference introduced into it from adjacent satellites and decreases its Carrier to Interference (C/I) ratio. Similarly, as a transmitting earth station antenna diameter is reduced, the antenna gain is reduced; this generally results in a requirement for more transmit power to satisfy the link budget. Increased transmitter power results in more interference power into adjacent satellite and adjacent terrestrial systems.

7. The comments and reply comments concerning this question raised in the Second Notice of Inquiry have generally focused on the use of small antennas in the Fixed-Satellite Service, with emphasis on the 4 and 6 GHz bands used by domestic satellite systems. A number of technical approaches were suggested, such as restrictions on off-axis EIRP density or the imposition of a minimum Gain to noise Temperature (G/T) ratio. Some parties also suggested that exclusive allocations be made for Small Antenna Earth Stations (SAES). That such questions need be addressed is apparent from the increased use of small antennas which is generally expected in the future. For example, COMSAT General estimates requirements of 1600 MHz, 800 MHz and 950 MHz for use by small antenna earth stations in providing data, video and facsimile, and voice communications (assuming 60 kHz channels), respectively, by the year 2000 in the Fixed-Satellite Service alone. While our Declaratory Ruling and Order referenced above addressed the use of small an-

<sup>1</sup> For convenience, an earth station antenna can be considered to be "small" if its gain is less than or equal to the gain of a parabolic antenna whose diameter is less than ninety times the operating wavelength (4.5 m at 6 GHz).

<sup>2</sup> Declaratory Ruling and Order (FCC 76-1169) adopted December 15, 1976 in RM-2614 and RM-2725.

<sup>3</sup> Characteristics of the United States Government Communications Satellite System, Phase II, US CCIR SG 8C/234, 1976.

<sup>4</sup> Disaster Warning Satellite Study update, NASA, TMX-73407, Lewis Research Center, Cleveland, Ohio, May 1976.

<sup>5</sup> In practice, the communications services provided by means of small antenna earth stations tend to differ substantially in quantity and quality from those provided by means of larger antennas.



tennas with our present domestic satellites in a manner that insures reasonably small orbital separations between satellites, consideration is appropriate to the question of how small antennas could be employed on a worldwide basis in a manner that insures efficient orbit and spectrum use. While this question is of importance not only in the Fixed-Satellite Service, but also in the other space services where operational requirements could lead to the use of antennas that are small enough to be carried by hand, specific criteria for them are not addressed in this Inquiry. These issues, except as noted above, and suggested approaches to resolution will be discussed in the following paragraphs.

8. The frequency bands 2500-2535 and 2655-2690 MHz, according to AT&T, "... have already been allocated for support services which are usually considered to be of the small earth terminal variety." AT&T believes that the frequency bands 6625-7125 MHz and 11.7-12.2 GHz are both suitable for accommodating SAES; the latter has no sharing problems with the fixed service in the U.S. It also believes that the frequency band 12.5-12.75 GHz is suitable for SAES use because the smaller number of radio relay systems in this band makes the sharing problem less critical than in the 6 and 4 GHz bands. Collins Radio, in its reply comments, supported the contentions of AT&T. Transcommunications suggested that a clear channel of 40 MHz in the 6/4 GHz bands should be established for SAES operations. EXXON suggested that the SAES could be shifted at a later date from the 6/4 GHz bands to other frequency bands or that they could be required to use more sophisticated equipment. In addition, AT&T stated that the frequency band 14.0-14.5 GHz is currently free of sharing between the space and terrestrial services. American Satellite Corporation also expressed the need for exclusive allocations to SAES below 10 GHz. However, other respondents did not agree to this approach. Both Communications Satellite Corporation (COMSAT) and COMSAT General Corporation (COMSAT General) opposed allocation of exclusive frequency bands to SAES.

9. The frequency bands 2500-2535 and 2655-2690 MHz have a comparatively small 35 MHz bandwidth and as such could be less attractive. In the United States, this band is shared co-equally with the Instructional Television Fixed Service (ITFS). The sharing situation between an ITFS omnidirectional transmitter and an earth station is very critical. To this time, no common carrier has decided to put a transponder in this band. Considering this, these frequency bands may not offer an attractive choice for SAES use in the U.S.

10. Contrary to the assertions of AT&T, the frequency band 6625-7125 MHz is heavily used, although it may be less so than the 3700-4200 MHz band. In the U.S., the 6625-7125 MHz band is allocated to private microwave and television pickup whereas the 3700-4200 MHz band is allocated to common car-

rier point-to-point microwave. In order to satisfy the requirements stated by the advisory Fixed-Satellite Service Working Group, the frequency band 6625-6925 MHz has been proposed for the Fixed-Satellite (Earth-to-space) service. The frequency band 6625-7125 MHz is presently allocated to the Fixed-Satellite Service (Space-to-earth) in Brazil, United States and Canada on a secondary basis by footnote 392AA<sup>14</sup>. In order to provide protection to SAES, the band 6925-7125 MHz would have to be allocated internationally on a primary basis.

11. In Region 2, the frequency band 11.7-12.2 GHz is allocated on a primary basis to both the Fixed-Satellite and Broadcasting-Satellite Services, as well as to terrestrial services, on a co-equal primary basis. Within the United States, however, this band is allocated on a primary basis only to the two space services. For individual reception, relatively small diameter antenna earth stations are proposed to be used with high EIRP satellites. COMSAT General, in its comments to the Second Notice of Inquiry, stated that "... small earth terminals employing SCPC transmissions in a fixed service satellite system would be subject to interference from higher power broadcasting satellite service. Nevertheless, for certain types of small user applications, use of the 12/14 GHz bands at this time is the only feasible alternative ...". However, the relatively large EIRP difference, anticipated between broadcasting and fixed satellites operating in this band may restrict the utility of this band for such SAES applications. Further study is needed to assess the impact of high EIRP television transmissions in the Broadcasting-Satellite Service on the type of SCPC operations contemplated for SAES in this band.

12. If frequency bands are to be allocated exclusively to SAES, as proposed by AT&T, then the frequency band 11.7-12.2 GHz could be one choice, with 6925-7125 MHz (after primary allocation), 2500-2535 MHz and 2655-2690 MHz the other, but perhaps less attractive in terms of the available bandwidth choices. The 2.5 GHz band is reasonably developed and the space attenuation is independent of weather conditions. The 12 GHz band is currently being developed and requires a fade margin for rain/snow attenuation. There is currently no satellite service in the 6925-7125 MHz band; however, it appears there would be little difficulty in borrowing the available technology from the adjacent bands.

#### TECHNICAL APPROACHES

13. A number of technical approaches were suggested by the parties to specify limitations on technical design or operating parameters of SAES in order to

<sup>14</sup> It is noted that 6875-6925 MHz is part of the proposed band which continues to be shared with terrestrial fixed services.

<sup>15</sup> The Fixed-Satellite Service is a primary service in this band within the United States. However, changes in this allocation are presently under consideration; see Third Notice of Inquiry in this Docket.

set bounds on the impact of such facilities on spectrum and orbit utilization. While the proposals discussed below are prompted by SAES, they would be presumably applied to all types of earth station facilities.

#### INTERFERENCE LEVEL

14. Both COMSAT and COMSAT General stated that the single entry 400 pWpO interference level of CCIR Recommendation 466 (Rev. 74) should be the overriding sharing criterion. According to COMSAT General the 400 pWpO level of baseband interference should be met by an immediate adjacent satellite at an orbital separation of 4°. COMSAT has recently proposed that the amount of allowable interference specified by CCIR Recommendation 466 should be subject to a "scaling law" and should be a function of the ratio of the antenna diameter to the operating wavelength of the antenna. Basically, COMSAT proposes that the permissible intersatellite network interference for larger orbital spacings should be less than that for closer orbital spacings.

15. COMSAT General assumed an acceptable level of interference for digital transmission to be a degradation in the carrier to thermal noise (C/N) ratio of 0.2 dB; COMSAT pointed out that interference criteria for digital systems should be developed. COMSAT believes that a permissible change in the operating Bit Error Rate (BER) should be established and adopted by the 1979 GARC.

16. The interference into an analog signal has been calculated using the convolution method.<sup>17</sup> This method has been extended<sup>18</sup> to calculate the interference caused by Single Channel Per Carrier (SCPC) channels used by a number of small antenna earth stations. These SCPC channels generally have a channel spacing of between 60 and 30 kHz, depending on the type of modulation employed and service application. While studies conducted to date have indicated an apparent feasibility of implementing such types of SCPC operations with 4 degree separations between current domestic satellites in the 4 and 6 GHz bands under certain limited conditions, such use has not yet been demonstrated in the general case.

17. AT&T has also expressed concern that a proliferation of SAES in the 4 and 6 GHz bands might impair the development and expansion of microwave relay systems in these bands, particularly since the present sharing criteria may not accurately reflect the aggregate interference over the entire length of a transcontinental system from a larger number of earth stations than the two or four presently assumed. Other parties take issue with AT&T's position, pointing to

<sup>17</sup> B. A. Pontano, J. C. Fuenzalida and N. K. M. Chitre, "Interference into angle modulated systems carrying multi-channel telephone signals," IEEE Transactions on Communications, Vol. COM-24, No. 6, pp. 715-726, June 1973.

<sup>18</sup> A. Das and George Sharp, "Convolution method of interference calculation," FCC/OCE RS 75-04, April 1975.



the greater use that small antenna earth stations can make of natural or man-made shielding and the lower probability that such earth stations would be simultaneously transmitting on the same frequency. ASC stated that " \* \* \* interference into a particular frequency slot in a terrestrial radio-relay system is more nearly proportional to the number of satellites being accessed \* \* \* " However, none of these parties advanced specific proposals in this regard for our consideration.

#### UPLINK POWER LIMITATIONS

18. In order to limit the interference level produced by any SAES to an adjacent satellite, several respondents have proposed a numerical limit on the earth station radiation density. AT&T found " \* \* \* considerable merit \* \* \* " in the Commission suggested e.i.r.p. density criterion:

$$36-25 \log \theta \text{ dBW/4 kHz, } 2.5 < \theta < 48^\circ$$

AT&T suggested that this criterion should be applicable to any three-dimensional angle off the main beam axis, ASC, in its reply comments, agreed to the basic principle of a limit on the off-axis radiation density. EXXON and the Central Committee on the Telecommunications of the American Petroleum Institute endorsed the earth station e.i.r.p. density limit suggested by the Commission. Western Union also supported the concept of " \* \* \* control of uplink power density \* \* \* "

19. COMSAT derived and proposed a maximum PFD limit at the geostationary orbit from an earth station not to exceed  $-115.5-25 \log \theta \text{ dBW/m}^2$  in any 40 kHz band.

It expressed the preference for radiation density expressed per 40 kHz because that is " \* \* \* the narrowest RF carrier unit normally encountered in practice". The currently used bandwidth of 4 kHz was adopted because of the relationship to the "nominal" 4 kHz telephone channel and the convenience in measuring this value with available instrumentation; it has little relation to the bandwidth of the signal. A signal with a large spike may be able to pass the 40 kHz radiation density criterion, but may fail the 4 kHz density criterion. COMSAT recognized that, depending on the type of modulation, " \* \* \* different carriers having the same maximum power flux density may produce substantially different interference levels \* \* \* " COMSAT's proposal provides protection to satellites but not necessarily to terrestrial radio relay systems. However, an off-axis three-dimensional e.i.r.p. density criteria could protect both satellites and radio relay systems.

20. COMSAT General calculated the level of the off-axis ( $4^\circ$ ) e.i.r.p. density that could be transmitted from an earth station without causing more than 400 pWpO of interference to an adjacent FM analog satellite system at an orbital separation of 4 degrees. Results of the calculations indicate a range of 10.4 to

27 dBW/4 kHz of permissible off-axis radiation depending on the transmission systems involved. COMSAT General concluded that it would not be possible to establish a single off-axis e.i.r.p. density limit, although it could be possible to specify a range of off-axis e.i.r.p. density for different transmission parameters. However, COMSAT General believes that the specifications of large sets of e.i.r.p. densities may not be practicable.

#### G/T RATIO

21. The ratio of the Gain of the antenna to the noise Temperature of the receiving system (G/T) is a figure of merit for an earth station. ASC stated that "The capacity, in number of circuits, of a transponder increases as the earth station G/T increases. This is because, in order to provide adequate transmission quality, satellite downlink power can be traded off against the earth station G/T. Since the downlink power is limited, more must be used to compensate for the lower G/T and lower gain of a small diameter antenna. This higher allocation of power thereby lowers the circuit capacity of a transponder. Thus transponder capacity varies directly with earth station G/T, up to a maximum capacity determined by the transponder bandwidth and earth station modulation techniques." COMSAT, EXXON, Collins Radio Group, Joint Council on Educational Telecommunication (JCET) and the Central Committee on the Telecommunications of the American Petroleum Institute opposed the establishment of any G/T criteria. AT&T suggested that a minimum value of G/T of 20 dB at 4 GHz is insufficient and proposed a minimum value of 30 dB.

#### ORTHOGONAL POLARIZATION

22. COMSAT believes that the use of polarization discrimination as a means to increase single-satellite capacity is economically and operationally vastly superior to its use in reducing interference between systems. COMSAT believes that the adoption of standards for polarization discrimination would not be desirable. Western Union submitted that, " \* \* \* certain additional advantages accrue to future satellite systems which reuse the frequency spectrum with orthogonal polarization, it is also recognized that the mode of operation increases the cost of small diameter antenna earth stations \* \* \* " Home Box Office (HBO) challenged the "cost penalty" statement of Western Union. HBO stated that Western Union had not offered any data to support the claim that a cost penalty is incurred by the use of small antenna earth stations in conjunction with cross-polarized satellite systems. JCET endorsed the adoption of cross-polarization standards.

#### SIDELobe RADIATION

23. A SAES has generally smaller discrimination. ASC, JCET and AT&T suggested sidelobe control of the SAES; and AT&T suggested the following three-

dimensional sidelobe envelope in the 4 GHz band for SAES:

$$32-25 \log (\theta) \text{ dBi } 1^\circ \leq \theta \leq 48^\circ \\ -10 \text{ dBi } 48^\circ \leq \theta \leq 180^\circ$$

However, EXXON opposed any regulation of sidelobes, and the Central Committee on Telecommunications of the American Petroleum Institute suggested that the SAESs should have less stringent sidelobe control. The Corporation for Public Broadcasting (CPB) is developing SAESs with smaller sidelobe levels. The paraboloidal reflector, off-set fed with a corrugated conical horn, has been demonstrated to be capable of providing radiation patterns with extraordinarily low radiation levels in the far-out and back-lobe regions. Levels more than 75 dB below the main beam maximum have been attained outside the mainbeam region—and beyond the first few sidelobes—for an antenna having a half-power beamwidth of approximately  $1.7^\circ$ . It is likely that development of low-cost, low sidelobe antennas would reduce the barriers to SAES usage.

#### DISCUSSION

24. As noted in the Second Notice of Inquiry, the purpose of requesting comments on the use of small antenna earth stations was to seek suggestions from interested parties on how to insure efficient utilization of the orbit on an international basis. Our focus on small antenna reflects the potentially larger impact of such facilities on required satellite separations if no additional steps are taken to control their impact. As noted above, we have recently issued a Declaratory Ruling setting forth our approach to licensing small antenna earth stations with present domestic satellites in the 4 and 6 GHz bands in a manner that preserves orbital separations of 4 degrees required for standard size antennas with diameters of 10 meters or more. However, the approach taken in that decision was more of an administrative one in defining the types of technical showings and analyses required in applications submitted for authority to construct and operate small antenna earth stations, rather than the imposition of specific technical standards on the design and operation of such facilities. While such a flexible approach is feasible on a domestic basis, it is not evident that an analogous type of approach is feasible on an international basis. This is because the current coordination and notification procedures set forth in Article 9A of the International Radio Regulations are directed to avoiding unacceptable levels of interference to existing satellite networks, not to insuring reasonably small satellite separations.

25. With respect to the proposals of several parties that exclusive allocations or sub-allocations be reserved for com-

\* H. Paris Coleman, R. M. Brown and B. D. Wright, "Paraboloidal reflector offset fed with a corrugated conical horn", pp. 817-819, IEEE Trans. on Antennas and Propagation, November 1975.



mon carrier SAES operations, we are not convinced that this would be a satisfactory approach. In particular, there is a wide range of communications requirements that can be satisfied with SAES in a manner that would not require large orbital separations between satellites. Specific requirements have not been identified for SAES which cannot be satisfied with careful coordination between satellites to preserve reasonably small satellite separations. Absent such requirements, it appears preferable to avoid distinctions in the international Radio Regulations with respect to the use of certain frequency bands that are based only on antenna size.

26. Accordingly, parties advocating exclusive allocations or sub-allocations for SAES operations should focus their comments on the following points:

(a) What types of communications requirements require transmissions from SAES that are incompatible, even with careful frequency coordination, with reasonably small (e.g., less than 4 degrees) satellite spacings achievable with larger antennas;

(b) Given such requirements, would the present allocations in the vicinity of 25 GHz have sufficient bandwidth to support economically feasible systems, or would a wider bandwidth, e.g., 6625-6925 MHz, be required; in the latter event, where would the corresponding downlink allocation be located; and

(c) In the event such allocations were limited to the types of uses of SAES identified in (a) above, what orbital separations would be possible in such bands.

27. The technical approaches suggested by several of the parties appear to have a greater degree of effectiveness. However, it is still necessary to further examine these suggestions to insure that any such restrictions do not inadvertently preclude types of services that may be provided by SAES after necessary coordination is effected that retains reasonably small satellite separations. Of these suggestions, EIRP density limits and/or antenna sidelobe standards appear to have the greatest support. However, as pointed out by COMSAT General, a wide range of power densities can be expected in actual practice. Any proposed limit would therefore only preclude the worst case type of situations with additional frequency coordination required to accommodate other cases and still maintain small spacings. While a power limit as a function of off-axis angle would be sufficient in the case of transmitting earth stations, some limit on receiving antenna characteristics would appear necessary under such an approach to maintain orbital separations required to protect receiving stations to reasonable values. However, restrictions on minimum G/T ratios were not widely supported and do not in themselves appear to provide sufficient assurance that reasonably small orbital separations will result.

28. Accordingly, it appears desirable to obtain additional comments with respect

to proposals to place restrictions on technical characteristics of earth station facilities. Specifically, the following points should be addressed:

(a) Would a power limitation of the magnitude discussed in paragraphs 18 and 19 above preclude types of services that could otherwise be accommodated with reasonably small satellite separations through careful frequency coordination;

(b) What should be the specific numerical value and the reference bandwidth for the specification of e.i.r.p. densities;

(c) Is it technically and economically feasible to achieve, in practice, the following sidelobe level:

$$\text{Gain, dB} = 30 - 25 \log_{10} \theta, \quad 2.5^\circ < \theta < 48^\circ \\ -12, 48^\circ < \theta < 180^\circ$$

where  $\theta$  = angle off the main beam axis.

(d) What interference criteria should be used for digital systems? What should be permissible bit error rate?

(e) Is the use of cross-polarization more effective in increasing the capacity of an individual satellite by frequency re-use or in reducing separation between satellites? Is the use of orthogonal polarization economically and technically feasible for reducing interference related to SAES systems? What values of cross-polarization, if any, should be specified?

(f) For what bands should such standards be specified, and how would such values change with the frequency band to which they are applicable?

29. While we recognize the importance of interference criteria establishing required satellite spacings, it has not been considered appropriate to specify such values in the international Radio Regulations themselves. Rather, such criteria have more appropriately been set forth in relevant CCIR Reports and Recommendations for the guidance of administrations in effecting coordination under Articles 9 and 9A. However, to the extent that more current criteria are available for the purpose of determining when coordination is required through Appendices 28 and 29, consideration is appropriate to including such revised criteria there. Comments in this regard are requested.

30. Finally, it is noted that the majority of comments have focused only on the 4 and 6 GHz bands used by present fixed satellites. It must be emphasized, however, that the 1979 GWRAC will be concerned with all frequency bands and all space radiocommunications services. However, the considerations discussed above are primarily applicable to the Fixed- and the Broadcasting-Satellite Services, whereas the criteria for other services could be substantially different.

#### TECHNICAL REGULATIONS

31. The Commission is reviewing the technical provisions of the Radio Regulations.

32. The Commission is recommending changes in Article 7 and in Appendices 3 and 4 as discussed in Appendix A. In the regulations 470VC through VE, the station keeping of space stations is proposed

to be  $\pm 0.1$  degree which will provide better orbit-spectrum utilization. In the regulation 470 VF, the spacecraft antenna pointing error is proposed to be 0.1 degree providing reduced inter-satellite system interference and providing reduced unwanted signals in the adjacent territory of another Administration. Similar provisions were adopted in the 1977 Broadcasting-Satellite World Administrative Radio Conference.

33. In the Third Notice of Inquiry we submitted three options for the expression of a frequency tolerance and asked for the public's opinion on which would be most appropriate in the international Radio Regulations. The first option expressed the tolerance as a percentage of carrier frequency (as in the present Radio Regulations); the second option applied an absolute tolerance to each frequency band; and the third applied a percentage tolerance related to the authorized or necessary bandwidth. The American Telephone and Telegraph Company and the COMSAT General Corporation commented on the options.

34. AT&T stated that "The first two options are equally preferable and the third is less desirable." It believes the first method is attractive because " \* \* \* in equipment design the maximum possible frequency tolerance tends to be proportional to the absolute frequency" and also because " \* \* \* the difficulty of maintaining a transmitter within a specified frequency range generally increases in proportion to carrier frequency"; however, AT&T states one drawback is that " \* \* \* it may result in transmitters in higher bands being allowed to drift more than those in lower bands \* \* \*". It believes that the second method " \* \* \* relates directly to the ways in which equipment is operated and maintained \* \* \* maintenance instructions ordinarily specify the requirements in absolute frequency \* \* \*". AT&T opposes the adoption of the third method because " \* \* \* narrowband users in a given bandwidth might be required to maintain a tighter tolerance than a wideband user in the same band" and that would constitute a double standard. AT&T noted that the fundamental problem in specifying tolerances is that prescribed tolerances are applied over too wide a range and recommended that tolerances be specified for each frequency band; in that case it would make little difference if the permissible tolerance were stated as an absolute number or as a percentage.

35. COMSAT General supported the second option because " \* \* \* option (a) will result in either too tight specifications for low frequency bands, or loss of spectrum at high frequency bands, while option (c) on the other hand will result in various frequency tolerance specifications within the same frequency band, based upon the authorized or necessary bandwidth".

36. Paragraph 154 of the Third Notice of Inquiry presented three options for designating frequency tolerances for radio relay systems. The comments received indicated a "preference" for the second option, which would apply an



absolute tolerance to each frequency band in the Radio Regulations, and an opposition to the third option, which would apply a percentage tolerance relative to the authorized or necessary bandwidth. Since one of the two respondents stated the first two options are equally preferable, we have made proposals for modification to Radio Regulation Appendix 3 which uses both methods, dependent upon the specific characteristics of the radio services involved.

37. The revisions to Appendices 3 and 4 of the Radio Regulations are proposed herein for the purpose of obtaining comments. In many cases the frequency tolerances shown for the proposed revision of Appendix 3 are more stringent than are required by the FCC rules, or within the Government. The current tolerances required by the Radio Regulations are much too loose when compared with the current state of the art. Tighter tolerances would lead to improved spectrum utilization. The big question is how much tighter should these tolerances be. Comments, therefore, are sought on the technical rationale to depart from the tolerances shown. To accommodate expected improvements in spectrum utilization by certain services, it was deemed necessary to propose tighter tolerances than are required by the current Radio Regulations.

#### EMISSION DESIGNATORS

38. The designation of emissions is set forth in Article 2 of the Radio Regulations. This designation consists of the necessary bandwidth, the type of modulation of the main carrier, the type of transmission, and supplementary characteristics. Reference is made within the international Radio Regulations to specific emission designations in Articles 5, 7, 28, 28A, 29A, 32, 35, 36 and 39, as well as in numerous Appendices, and Resolutions. The designation of the emission is a very important and useful tool in the management of the radio spectrum, especially with regard to the evaluation of potential for and susceptibility to interference.

39. Recommendation 8 of the Administrative Radio Conference, Geneva, 1959, requested that the CCIR, in conjunction with the IFRB, study various methods of designating and classifying emissions. The method was to be one which would suffice over a long period, and which would enable all of the essential infor-

mation of the emissions to be provided (emphasis added). The CCIR engaged this task and produced Recommendation 432 in earlier Plenary Assemblies. After a period of testing, the U.S. found Recommendation 432 to be unacceptable and made further recommendations which led to the adoption of Opinion 44 at the XIIIth Plenary of the CCIR. Opinion 44 calls for Administrations to conduct trials of the method of classifying and designating their emissions as described in the Annex to Opinion 44 with the ultimate object of enabling the next appropriate Administrative Radio Conference to consider the method for inclusion in the Radio Regulations.

40. Extensive trials of the new emission system were not conducted; however, various government agencies examined the new proposal to determine its impact on their operations. While comments generally indicated that the system described in Opinion 44 could be implemented, there was strong concern evinced over whether there was to be any benefit derived from the new system and what impact the new system would have on day-to-day operations. Opinion 44 was studied further by the U.S. in its CCIR activities and a new proposal to modify Opinion 44 was submitted to the May-June 1976 CCIR Interim Meetings. The U.S. proposal, along with those of several other administrations, resulted in a revised Opinion 44 being adopted by the interim meetings. The U.S. is now attempting to refine this system even further, looking towards its final adoption at the CCIR Final Meetings, thereby providing a sound basis for U.S. proposals in this area to the 1979 World Administrative Radio Conference. This refinement is a continuing process, as is the entire conference preparatory activity. Attached as Appendix B to this Notice of Inquiry is the latest version of the emission designator system being considered by the United States for possible eventual submission to the 1979 WARC. Comments are solicited regarding the merits, advantages and disadvantages of this new system as opposed to the current method, bearing in mind that the United States has been a leader in the revision of the emission designator system and that some modification to the system will be inevitable at the 1979 WARC.

41. All participants should keep in mind the importance of the 1979 WARC

results. Based upon past experience, decisions reached at this conference can be expected to provide the basis for international radio regulation policy for most of the remainder of this century. It is of the utmost importance to develop U.S. proposals which effectively promote that combination of telecommunication uses which offers the maximum social and economic contribution to the national welfare and which also contain the flexibility necessary to accommodate important new applications of this dynamic technology as well as the unique requirements of our international partners in the ITU. It must be recognized that the U.S. proposals are for the GWRAC and that the national implementation of the results of the GWRAC will require extensive U.S. national consideration.

42. Comments on the use of small antenna earth stations relevant to the preparation for the 1979 GWRAC are hereby sought from all interested United States individuals, parties, or groups of parties which may exist.

43. Pursuant to applicable procedures set forth in § 1.415 of the Commission's rules, interested persons may file comments on or before July 11, 1977, and reply comments on or before July 26, 1977. All relevant and timely comments and reply comments, along with any pertinent information which the Commission may have available, will be considered. When commenting, it should be borne in mind that this effort is directed toward international regulations and not domestic issues. The U.S. wants to achieve maximum flexibility in international regulatory proposals.

44. Although § 1.419 of the Commission's Rules required that an original and five copies of all statements, briefs or comments be filed in response to a Notice, the Commission's conference preparatory organization necessitates the filing of an original and nineteen copies. All responses received will be available for public inspection during regular business hours in the Commission's Public Reference Room at its Headquarters in Washington, D.C.

45. This Notice is issued pursuant to the authority set forth in section 4(i) of the Communications Act of 1934, as amended 47 U.S.C. 154 (i).

FEDERAL COMMUNICATIONS  
COMMISSION,  
VINCENT J. MULLINS,  
Secretary.



Appendix A  
(Technical Regulations)

2.

Spa2 Station Keeping of Space Stations<sup>2</sup>

470VB § 26. Space stations on geostationary satellites:  
Spa2

MOD 470VC  
Spa2 -shall have the capability of maintaining their positions within  $\pm 0.1$  degree of the longitude and latitude of their nominal positions, but efforts should be made to achieve a capability of maintaining their positions at least within  $\pm 0.5$  0.05 degree of the longitude and latitude of their nominal positions;

MOD 470VD  
Spa2 -shall maintain their positions within  $\pm 0.1$  degree of longitude and latitude of their nominal positions irrespective of the cause of variation; but

MOD 470VE  
Spa2 -need not comply with No. 470VD as long as the satellite network to which the space station belongs does not produce an unacceptable level of interference into any other satellite network whose space station complies with the limits given in No. 470VD.

Spa2<sup>2</sup> In the case of space stations on geosynchronous satellites with orbits having an angle of inclination greater than 5 degrees the positional tolerance shall relate to the nodal point.

470VE.1  
Spa2<sup>1</sup> The level of unacceptable interference shall be fixed by agreement between the administrations concerned, using the relevant C.C.I.R. Recommendations as a guide.

Reason: In the interest of more efficient orbit-spectrum utilization, it is considered necessary to maintain a closer station-keeping tolerance of  $\pm 0.1$  degree in longitude and latitude. This minimizes the loss in receiving antenna gain and aids in reducing the potential for interference.

Spa2 Pointing Accuracy of Antennae on Geostationary Satellites

MOD 470VF § 27. The pointing direction of maximum radiation of any earth-ward beam of antennae on geostationary satellites shall be capable of being maintained within:

40  $\pm$  of the half power beamwidth relative to the nominal pointing direction, or

0.5 0.1 degree relative to the nominal pointing direction, whichever is greater. This provision applies only when such a beam is intended for less than global coverage.

In the event that the beam is not rotationally symmetrical about the axis of maximum radiation, the tolerance in any plane containing this axis shall be related to the half power beamwidth in that plane.

This accuracy shall be maintained only if it is required to avoid unacceptable interference<sup>2</sup> to other systems.

470VF.1  
Spa2<sup>2</sup> The level of unacceptable interference shall be fixed by agreement between the administrations concerned, using the relevant C.C.I.R. Recommendations as a guide.

Reason: These modifications are proposed to minimize the spillover outside the intended coverage area and to take maximum advantage of frequency re-use when pencil beams are used. It is necessary to maintain the highest possible beam-pointing accuracy.

NOTICES

26927



26928

## NOTICES

3.

## APPENDIX 3

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## Table of Frequency Tolerances\*

(See Article 12)

1. Frequency tolerance is defined in Article 1 and is expressed in parts in  $10^6$  or, in some cases, in Herz Hz.
2. The power shown for the various categories of stations is the mean power as defined in Article 1.

Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations	Tolerances applicable until 1st January, 1944* 1957 to transmitters in use and to those to be installed before 1st January, 1944 1957	Tolerances applicable to new transmitters installed after 1st January, 1944 1957
Band: 10 to 535 kHz		
1. Fixed Stations:		
- 10 to 50 kHz	1 000	4 000 <u>100</u>
- 50 to 535 kHz	200	200 <u>50</u>
2. Land Stations:		
a) Coast Stations:		
- power 200 W or less	500 1)	400 <u>20</u> <u>10</u> <u>5</u> <u>1</u> <u>1</u>
- power above 200 W	200 1)	200 <u>20</u> <u>10</u> <u>5</u> <u>1</u> <u>1</u>
b) Aeronautical Stations	100*	100** <u>50</u>
3. Mobile Stations:		
a) Ship Stations	1 000 k)	4 000 <u>20</u> <u>10</u> <u>5</u> <u>1</u> <u>1</u> k)
b) Ship's Emergency Transmitters	5 000	5 000 <u>20</u> <u>10</u> <u>5</u> <u>1</u> <u>1</u>

\*Certain services may need tighter tolerances for technical and operational reasons.

Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations

Tolerances applicable until 1st January, 1944\* 1957 to transmitters in use and to those to be installed before 1st January, 1944 1957

\*1st January, 1957 in the case of all tolerances marked with an asterisk.

c) Survival Craft Stations	5 000	5 000 <u>20</u> <u>10</u> <u>5</u> <u>1</u> <u>1</u>
d) Aircraft Stations	500	400 <u>50</u>
4. Radiodetermination Stations	100*	100**
5. Broadcasting Stations	10 Hz	10 Hz
Band: 535 to 1 605 kHz		
Broadcasting Stations		
	10 Hz b)	10 Hz
Band: 1 605 to 4 000 kHz		
1. Fixed Stations:		
- power 200 W or less	100	100
- power above 200 W	50	50
2. Land Stations:		
- power 200 W or less	100 b) 1)	400 <u>50</u> b) 1)
- power above 200 W	50 b) 1)	50 b) 1)
3. Mobile Stations:		
a) Ship Stations	200 1) k)	200 <u>20</u> <u>10</u> <u>5</u> <u>1</u> <u>1</u> k)
b) Survival Craft Stations	300	400 <u>20</u> <u>10</u> <u>5</u> <u>1</u> <u>1</u>
b A) Emergency Position-Indicating Radiobeacons	300	400 <u>20</u> <u>10</u> <u>5</u> <u>1</u> <u>1</u>
c) Aircraft Stations	100 *	100 <u>5</u>
d) Land Mobile Stations	200	200 <u>20</u> <u>10</u> <u>5</u> <u>1</u> <u>1</u>



Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations

Tolerances applicable until 1st January, 1964\* 1987 to transmitters in use and to those to be installed before 1st January, 1964\* 1985

Tolerances applicable to new transmitters installed after 1st January, 1964\* 1985 and to all transmitters after 1st January, 1964\* 1987

\*1st January, 1970 in the case of all tolerances marked with an asterisk.

#### 4. Radiodetermination Stations:

- power 200 W or less	100	400 <u>20</u>
- power above 200 W	50	50 <u>10</u>

5. Broadcasting Stations	20	20 <u>10</u> Hz
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Band: 4 to 29.7 MHz

#### 1. Fixed Stations:

- power 500 W or less	50	50 <u>30</u>
- power above 500 W	15	45 <u>10</u>

#### 2. Land Stations:

##### a) Coast Stations:

- power 500 W or less	50 h) 1)	50 <u>20</u> Hz h) 1)
- power above 500 W and less than or equal to 5 kW	30* h) 1)	30* <u>20</u> Hz h) 1)
- power above 5 kW	15 h) 1)	45 <u>20</u> Hz h) 1)

##### b) Aeronautical Stations:

- power 500 W or less	100	100 <u>r)</u>
- power above 500 W	50	50 <u>r)</u>

##### c) Base Stations:

- power 500 W or less	100	200 <u>30</u>
- power above 500 W	50	50 <u>10</u>

#### 3. Mobile Stations:

##### a) Ship Stations

1) Class A1 emissions	50 p) q)	50 <u>20</u> Hz p) q)
2) Emissions other than A1	50 i) k)	50 <u>20</u> Hz i) k)

Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations

Tolerances applicable until 1st January, 1964\* 1987 to transmitters in use and to those to be installed before 1st January, 1964\* 1985

Tolerances applicable to new transmitters installed after 1st January, 1964\* 1985 and to all transmitters after 1st January, 1964\* 1987

\*1st January, 1970 in the case of all tolerances marked with an asterisk.

- power 50 W or less	50 c) i) k)	50 c) i) k) <u>20</u> Hz
- power above 50 W	50 i) k)	50 i) k) <u>20</u> Hz

b) Survival Craft Stations	200	200 <u>20</u> Hz
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c) Aircraft Stations	100*	100* <u>r)</u>
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d) Land Mobile Stations	200	200 <u>20</u> Hz
-------------------------	-----	------------------

4. Broadcasting Stations	15	45 <u>2</u>
--------------------------	----	-------------

Band: 29.7 to 100 MHz

#### 1. Fixed Stations:

- power 200 W or less	50*	50* <u>30</u>
- power above 200 W	30	30 <u>10</u>

#### 2. Land Stations:

- power 15 W or less	50	50
- power above 15 W	20	20

#### 3. Mobile Stations:

- power 5 W or less	100	400 <u>50</u>
- power above 5 W	50	50 <u>10</u>

4. Radiodetermination Stations	200	200 <u>50</u>
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Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations

Tolerances applicable until 1st January, 1966\* 1987 to transmitters in use and to those to be installed before 1st January, 1966 1985

Tolerances applicable to new transmitters installed after 1st January, 1966 1985 and to all transmitters after 1st January, 1966\* 1987

\*1st January, 1970 in the case of all tolerances marked with an asterisk.

5. Broadcasting Stations (other than television):

- power 50 W or less	50	50 <u>1000 Hz</u>
- power above 50 W	20	20 <u>1000 Hz</u>

6. Broadcasting Stations (television sound and vision):

- power 50 W or less	100	100 <u>2000 Hz</u>
- power above 50 W	1000 Hz	1 000 <u>500 Hz</u>

Band: 100 to 470 MHz

1. Fixed Stations:

- power 50 W or less	50*	50* <u>20</u>
- power above 50 W	20*	20* <u>10</u>

2. Land Stations:

a) Coast Stations	20 n)	20 n) <u>10</u>
b) Aeronautical Stations	50	50 <u>20</u>
c) Base Stations:		

- power 5 W or less	50	50 <u>30</u>
- power above 5 W	20	20 <u>10</u>

3. Mobile Stations:

a) Ship Stations and Survival Craft Stations:		
- in the band 156-174 MHz	20 n)	20 n) <u>10</u>
- outside the band 156-174 MHz	50 d) o)	50 d) o)

8.

Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations

Tolerances applicable until 1st January, 1966\* 1987 to transmitters in use and to those to be installed before 1st January, 1966 1985

Tolerances applicable to new transmitters installed after 1st January, 1966\* 1985 and to all transmitters after 1st January 1966\* 1987

\*1st January, 1970 in the case of all tolerances marked with an asterisk.

b) Aircraft Stations	50	50 <u>30</u>
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c) Land Mobile Stations:

- power 5 W or less	50	50 <u>30</u>
- power above 5 W	20	20 <u>10</u>

4. Radiodetermination Stations	50*d) e)	50* <u>20 d) e)</u>
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5. Broadcasting Stations (other than television)	20	20 <u>15</u>
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6. Broadcasting Stations (television sound and vision):

- power 100 W or less	100	100 <u>50</u>
- power above 100 W	1000 Hz	1 000 Hz <u>500 Hz</u>

Band: 470 to 2 450 MHz

1. Fixed Stations:

- power 100 W or less	300 f)	300 <u>100 f)</u>
- power above 100 W	100 g)	100 <u>50 g)</u>

2. Land Stations	300	300 <u>100</u>
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3. Mobile Stations	300	300 <u>100</u>
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4. Radiodetermination Stations	500e)	500 <u>400 e)</u>
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5. Broadcasting Stations (other than television)	100	100 <u>50</u>
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Frequency Bands (lower limit exclusive, upper limit inclusive) and Categories of Stations

Tolerances applicable until 1st January, 1966\* 1967 to transmitters in use and to those to be installed before 1st January, 1964 1965

Tolerances applicable to new transmitters installed after 1st January, 1964 1965 and to all transmitters after 1st January, 1966\* 1967

\*1st January, 1970 in the case of all tolerances marked with an asterisk.

#### 6. Broadcasting Stations (television, sound and vision) in the band 470-960 MHz

- power 100 W or less
- power above 100 W

100  
1000 Hz

100 50  
4 000 Hz 500 Hz

Band 2 450 to 10 500 MHz

#### 1. Fixed Stations:

- power 100 W or less
- power above 100 W

300 f)  
100 g)

200 30 f)  
100 10 g)

#### 2. Land Stations

300

200 30

#### 3. Mobile Stations

300

200 30

#### 4. Radiodetermination Stations

2000 e)

2 000 800 e)

#### 5. Space Stations

5

3

Band: 10.5 to 40 GHz

#### 1. Fixed Stations

500

500 50

#### 2. Radiodetermination Stations

7 500 e)

7 500 2500 e)

#### 3. Space Stations

10

7

m) SUP

n) In the area covered by the North American Regional Broadcasting Agreement (NARBA) the tolerance of 20 Hz may continue to be applied.

r) SUP

s) This tolerance is not applicable to survival craft stations operating on the frequency 243 MHz.

t) Where specific frequencies are not assigned to radar stations, the bandwidth occupied by the emissions of such stations shall be maintained wholly within the band allocated to the service and the indicated tolerance does not apply.

u) For transmitters using time division multiples the tolerance of 300 may be increased to 500.

v) This tolerance applies only to such emissions for which the necessary bandwidth does not exceed 1 000 kHz; for larger bandwidth emissions a tolerance of 300 applies.

w) For coast station single sideband radiotelephone transmitters the tolerance is 20 Hz.

x) For ship station single sideband radiotelephone transmitters the tolerance is:

- 1) in the band 1 605-4 000 kHz:  
100 Hz for transmitters in use or to be installed before 1 January 1982.  
50 Hz for transmitters installed after 1 January 1982.
- 2) in the band 4 000-23 000 kHz:  
100 Hz for transmitters in use or to be installed before 1 January 1978.  
50 Hz for transmitters installed after 1 January 1978.  
(See also Appendix 17A).

z) SUP

aa) For ship station transmitters used for direct printing telegraphy or for data transmissions, the tolerance is 40 Hz. This tolerance is applicable to equipment installed after 1 January 1976 and to all equipment after 1 January 1985. For equipment installed before 1 January 1976, the tolerance is 100 Hz (with a maximum deviation of 40 Hz for short periods of the order of 15 minutes).

bb) For coast station transmitters used for direct printing telegraphy and for data transmissions, the tolerance is 15 Hz. This tolerance is applicable to equipment installed after 1 January 1976 and to all equipment after 1 January 1985. For equipment installed before 1 January 1976, the tolerance is 40 Hz.

cc) SUP

dd) For coast and ship station transmitters in the band 156-174 MHz put into service after 1 January 1973 a tolerance of 10 parts in  $10^6$  shall apply. This tolerance is applicable to all transmitters, including survival craft stations, after 1 January 1985.

ee) For transmitters used by on-board communication stations, a tolerance of 3 parts in  $10^6$  shall apply.

ff) Applicable from 1 June 1977. However, in the A1 Morse working frequency bands a frequency tolerance of 200 parts in  $10^6$  may be applicable to existing transmitters after 1 June 1977, provided that the emissions are contained within the band in question.

gg) In the A1 Morse calling frequency bands frequency tolerances of 40 parts in  $10^6$  in the bands between 4 and 22 MHz and of 30 parts in  $10^6$  in the 25 MHz band are recommended as far as possible.

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r) For single sideband transmitters operating in the Aeronautical Mobile (R) Service, the tolerance is:

- 1) In the band 1605 - 4000 kHz  
Aeronautical Stations 10 Hz  
Airport Stations 20 Hz
- 2) In the band 4 - 29.7 MHz  
Aeronautical Stations 10 Hz  
Aircraft Stations 20 Hz

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## APPENDIX 4

## Table of Tolerances for the Levels of Spurious Emissions

(See Article 12)

REASON: See reasons for Appendix 4.

1. The following table indicates the tolerances which shall apply to the mean power of any spurious emission supplied by a transmitter to the antenna transmission line.

2. Furthermore, spurious radiation from any part of the installation other than the antenna system, i.e., the antenna and its transmission line, shall not have an effect greater than would occur if this antenna system were supplied with the maximum permissible power at that spurious emission frequency.

3. These tolerances shall not, however, apply to ship's emergency transmitters or survival craft stations.

4. 3. For technical or operational reasons, specific services may demand tolerances tighter than those specified in the Table.

5. The final date by which all equipment shall meet the tolerances specified in Column B is 1st January, 1976. Nevertheless, all administrations recognize the urgent need to implement Column B tolerances for all equipment at the earliest possible dates and will endeavour to ensure that necessary changes are made to all transmitters under their jurisdiction well before this date and wherever possible by 1st January, 1966.

6. No tolerance is specified for transmitters operating on fundamental frequencies above 235 MHz. For these transmitters the levels of spurious emissions shall be as low as practicable.

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Fundamental Frequency Band	The mean power of any spurious emission supplied to the antenna transmission line shall not exceed the values specified as tolerances in Columns A and B below	
	A Tolerances applicable until 1st January, 1970 1982 to transmitters new in use and to those installed before 1st January, 1964 1980	B Tolerances applicable to new transmitters installed after 1st January, 1964 1980 and to all transmitters after 1st January, 1970 1982
Below 30 MHz	40 decibels below the mean power of the fundamental without exceeding the power of 200 50 milliwatts	40 60 decibels below the mean power of the fundamental without exceeding the power of 50 milliwatts 133 microwatts
30 MHz to 235 MHz and above for transmitters having mean power:		
-- greater than over 25 watts	60 decibels below the mean power of the fundamental without exceeding 1 milliwatt <sup>1</sup>	60 decibels below the mean power of the fundamental without exceeding 1 milliwatt 50 microwatts
-- 25 watts or less	40 decibels below the mean power of the fundamental without exceeding 25 microwatts and without the necessity for reducing this value below 10 microwatts <sup>2</sup>	40 60 decibels below the mean power of the fundamental without exceeding 25 microwatts and without the necessity for reducing this value below 10 microwatts <sup>2</sup>

<sup>1</sup> For transmitters of mean power exceeding 50 kilowatts and which operate below 30 MHz over a frequency range approaching an octave or more, a reduction below 50 milliwatts microwatts is not mandatory, but a minimum attenuation of 60 decibels shall be provided and every effort should be made to keep within the 50 milliwatts microwatts limit.

<sup>2</sup> For hand-portable equipment of mean power less than 5 watts which operates in the frequency band below 30 MHz, the attenuation shall be at least 30 decibels, but every effort should be made to attain 40 60 decibels attenuation.

<sup>3</sup> For mobile transmitters which operate below 30 MHz any spurious emission shall be at least 40 60 decibels below the fundamental without exceeding the value of 300 milliwatts, 50 microwatts but every effort should be made to keep within the 50 milliwatts microwatts limit wherever practicable.

<sup>4</sup> For frequency modulated maritime mobile radio-telephone equipment which operates above 30 MHz, the mean power of any spurious emission falling in any other international maritime mobile channel, due to products of modulation, shall not exceed a limit of 10 microwatts and the mean power of any other spurious emission on any discrete frequency within the international maritime mobile band shall not exceed a limit of 2.5 microwatts. Where, exceptionally, transmitters of mean power above 20 watts are employed, these limits may be increased in proportion to the mean power of the transmitter.

REASON: It is believed that these tables should be revised to achieve an improvement to spectrum utilization. A review of both government and non-government tolerances shows that the specific limits appearing in the tables are attainable. Comments, however, are invited as to the desirability of using the specific tolerances shown.

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U. S. PROPOSED REVISION OF CCIR  
DRAFT RECOMMENDATION AB/1

As requested by I.F.R.B. Circular-letter No. 357, 15 July 1976, we have evaluated the provisional method of classifying and designating emissions as proposed by C.C.I.R. Draft Recommendation AB/1 and are submitting the following comments and recommendations.

In general, the method proposed in C.C.I.R. Draft Recommendation AB/1, provides a means to specify all essential information relating to an emission and we endorse the principle of including the essential information in three mandatory symbols. Our recommendations and comments represent changes which, it is felt, should simplify the application of the method without sacrificing essential content and effectiveness. Recommendations are summarized below and are included in the enclosure, which is a proposed revision to Draft Recommendation AB/1:

- a. A simplified method of designating necessary bandwidth is proposed;
- b. Information dealing with the nature of the multiplexing signal was shifted from the fifth symbol (optional) and inserted as part of the second symbol;
- c. The use of optional symbols by administrations may be implemented only as part of the administration's internal data process. Optional symbols should not be listed in Article 2; and,
- d. The letter N has been substituted for O in the list of symbols to avoid confusion as to whether it is the number zero or the letter O.

The method designating the necessary bandwidth of emissions proposed in Recommendation AB/1 appeared to be unnecessarily complicated considering the universality of use of emission designators and compelling reasons to keep the designator as simple to understand as possible, while retaining completeness, in order to accommodate those less technically advanced. Moreover, there is a measurable advantage to be able to understand the bandwidth at a glance without performing any conversions. Accordingly, the method proposed, following that used in the United States, employs a letter H, K, M, or G to designate Hz, kHz, MHz or GHz

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respectively, and a numerical value, having a maximum of four characters, including a decimal point. It was considered that if there was a computer reason to designate bandwidth in the "scientific method" proposed in Recommendation AB/1, then the conversion from a direct reading bandwidth should be made by those inserting the data into the computer. The method proposed is currently satisfactorily used in computer-based frequency management data systems in the United States. Examples, with comparison to Recommendation AB/1 are given below.

Necessary bandwidth	Proposed herein	Recommendation AB/1
25 Hz	H25	0250
400 Hz	H400	4000
2.4 kHz	K2.4	2401
12.5 kHz	K12.5	1252
36 kHz	K36	3602
180 kHz	K180	1803
1.25 MHz	M1.25	1254
6.25 MHz	M6.25	6254
27 MHz	M27	2705
200 MHz	M200	2006
5.6 GHz	G5.6	5607

A change from Draft Recommendation AB/1 which we are proposing affects the fifth optional symbol. The information contained in that symbol has been inserted into the second symbol because it was felt that the nature of the multiplexing signal was essential and should be included in the 3 mandatory symbols to preserve the use of the minimum number of symbols. This is consistent with judgments expressed previously in Recommendation 432-1 and Opinion 44 of the CCIR. The information was readily accommodated in the second symbol by allowing that symbol to become either alphabetical or numerical. The scheme adopted and outlined in the enclosure designates a modulated single channel emission by a number. Unmodulated and multi-channel emissions are designated by letters. In this manner, it was possible to retain the familiar symbols of Article 2 of F1, F2, F3, A1, A2 and A3 for single channel frequency modulated and double sideband emissions.

It is felt that the fourth symbol (optional) was not clearly defined and created a certain amount of confusion as to its application because it contains more than one character that could apply equally to describe an element of the emission. Further, some of the information, such as that relating to protection ratios or privacy should not be part of an emission symbol, even though its use is considered optional.

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U. S. PROPOSED REVISION OF CGLR  
DRAFT RECOMMENDATION AB/1

ANNEX

PART 1

PROVISIONAL METHOD FOR THE DESIGNATION OF EMISSIONS\*\*

1. Emissions are designated according to their necessary bandwidth and their classification. Whenever the full designation of an emission is required, the classification for that emission shall be preceded by an indication of the necessary bandwidth.

SECTION 1

NECESSARY BANDWIDTH

2. The necessary bandwidth shall be expressed by a maximum of five characters as follows:

The first character shall be a letter H, K, M, or G to designate Hz, kHz, MHz or GHz respectively. The letter shall be followed by a number composed of a maximum of three significant digits and a decimal point, if necessary. The number may not be less than 1.

Examples

<u>Necessary Bandwidth</u>	<u>Symbol</u>
25 Hz	H25
400 Hz	H400
2.4 kHz	K2.4
12.5 kHz	K12.5
36 kHz	K36
180 kHz	K180
1.25 MHz	M1.25
6.25 MHz	M6.25
27 MHz	M27
200 MHz	M200
5.6 GHz	G5.6

\*\* For certain terms used in Part 1, see Part 2.

SECTION II

CLASSIFICATION

3. Emissions are classified and symbolized according to the following characteristics. Modulation used only for short periods for incidental purposes such as identification, calling, etc., should be ignored.

SECTION II.1

BASIC CHARACTERISTICS

- 4.1 First symbol - Nature of emission (see Sec. 5 below).
- 4.2 Second symbol - Nature of signal modulating the main carrier and nature of multiplexing (See Sec. 6 below).
- 4.3 Third symbol - Type of transmission (see Sec. 7 below).

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5.	<u>First symbol-Nature of emission</u>	
5.1	Emission of an unmodulated carrier .....	N
5.2	Emission in which the main carrier is predominantly amplitude-modulated. It may include cases where sub-carriers are angle-modulated.	
5.2.1	Double-sideband .....	A
5.2.2	Single-sideband, full carrier .....	H
5.2.3	Single-sideband, reduced carrier .....	R
5.2.4	Single-sideband, suppressed carrier .....	J
5.2.5	Independent sideband .....	B
5.2.6	Vestigial sideband .....	C
5.3	Emission in which the main carrier is angle modulated	
5.3.1	Frequency modulation .....	F
5.3.2	Phase modulation .....	G
5.4	Emission of pulses (the carrier may, in addition, be frequency modulated)*	
5.4.1	Unmodulated sequence of pulses .....	P

5.4.2	A sequence of pulses which are modulated:	
5.4.2.1	in amplitude .....	K
5.4.2.2	in width/duration .....	L
5.4.2.3	in position/phase .....	M
5.4.2.4	by combinations of the foregoing or other means .....	Q
5.5	Cases not covered above, in which an emission consists of the main carrier modulated, either simultaneously or in a pre-established sequence, in a combination of two or more of the following modes:	
	- amplitude, - angle, - pulse .....	W
5.6	Cases not otherwise covered .....	X

\*Emissions, where the main carrier is directly modulated by a signal which has been coded into quantized form (e.g. pulse code modulation), should be designated under Secs. 5.2 or 5.3.

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6. Second symbol - Nature of signal modulating the main carrier and nature of multiplexing

- 6.1 No modulating signal ..... N
- 6.2 A single channel containing quantized information without the use of a modulating sub-carrier\* ..... 1
- 6.3 A single channel containing quantized information with the use of a modulating sub-carrier ..... 2
- 6.4 A single channel containing analogue information ..... 3
- 6.5 Two or more channels containing quantized information, operating simultaneously or in a pre-established sequence, all of which modulate the sub-carriers in frequency or phase.
- 6.5.1 Frequency-division multiplex ..... A
- 6.5.2 Time-division multiplex ..... B
- 6.5.3 Frequency-division multiplex with one or more channels using time-division multiplex ..... C
- 6.5.4 Type of multiplexing other than above ..... D
- 6.6 Two or more channels containing quantized information operating simultaneously or in a pre-established sequence.
- 6.6.1 Frequency-division multiplex ..... E
- 6.6.2 Time-division multiplex ..... F
- 6.6.3 Frequency-division multiplex with one or more channels using time-division multiplex ..... G
- 6.6.4 Type of multiplexing other than above ..... H
- 6.7 Two or more channels containing analogue information operating simultaneously or in a pre-established sequence.
- 6.7.1 Frequency-division multiplex ..... J

- 6.7.2 Time-division multiplex ..... K
- 6.7.3 Frequency-division multiplex with one or more channels using time-division multiplex ..... L
- 6.7.4 Type of multiplexing other than above ..... M
- 6.8 Composite system transmitting simultaneously, or in a pre-established sequence, one or more channels containing quantized information, together with one or more channels containing analogue information.
- 6.8.1 Frequency-division multiplex ..... P
- 6.8.2 Time-division multiplex ..... Q
- 6.8.3 Frequency-division multiplex with one or more channels using time-division multiplex ..... R
- 6.8.4 Type of multiplexing other than above ..... S
- 6.9 Cases not otherwise covered ..... X

\*This excludes time-division multiplex.



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7. Third symbol - Type of transmission.

- 7.1 Unmodulated main carrier or pulses ..... N
- 7.2 Telegraphy - manual ..... A
- 7.3 Telegraphy - automatic ..... B
- 7.4 Facsimile ..... C
- 7.5 Data transmission, telemetry, telecommand ..... D
- 7.6 Telephony (including sound broadcasting) ..... E
- 7.7 Television (video) ..... F
- 7.8 Combination of telegraphy (automatic) and facsimile ..... G
- 7.9 Combination of telegraphy (automatic) and telephony ..... H
- 7.10 Combination of facsimile and telephony ..... J
- 7.11 Combination of telephony and television ..... K
- 7.12 Combination of the above not otherwise covered ..... L
- 7.13 Cases not otherwise covered ..... X

## SECTION II.2

ADDITIONAL CHARACTERISTICS

8. If Administrations wish to describe for their internal needs further details of an emission, additional symbols fitting the present method of designating emissions may be used.

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## PART 2

## THE MEANING OF CERTAIN TERMS AS USED IN THIS ANNEX

<u>Main carrier</u>	The wave that may be combined with a modulating signal in the last modulation stage of a radio transmitter.
<u>Sub-carrier</u>	A carrier which is employed in an intermediate modulating process and then applied as part of the signal modulating the main carrier.
<u>Analogue signal</u>	A signal that follows the variation of a physical phenomenon continuously with an infinite number of possible values.
<u>Quantized signal</u>	A signal that varies over a finite number of discrete values.

## PART 3

## EXAMPLES

Description	RR Art. 2 Symbol	Symbols proposed in this method	
		55 5, 6, 7	
I. No modulation			
A. Emission of a radio-frequency carrier with no modulation			
A.1 No quantized or analogue information channels (CW radar)	or (AO (PO	XXX	
B. Unmodulated pulse train	PO	PNX	
C. Unmodulated pulse train using frequency-modulated carrier (chirp radar)	PO	PNX	
II. A single channel containing quantized information without the use of a modulating sub-carrier			
A. Emission predominantly amplitude-modulated			
A.1 Double-sideband (on-off keying)			
A.1.1 telegraphy using code with elements of differing numbers and/or durations, aural reception (Morse)	A1	ALA	
A.1.2 telegraphy using code with elements of differing numbers and/or durations, automatic reception (Morse)	A1	ALB	
A.1.3 telemetry using code with elements of the same number and duration, without error-correction	A1	ALD	

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Description	RR Art. 2 Symbol	Symbols proposed in this method	
		55 5, 6, 7	
B. Emission angle-modulated			
B.1 Telegraphy using code with elements of differing numbers and/or durations, automatic reception (frequency-shift keying, Morse)	FL	FLB	
B.2 Telegraphy using code with elements of the same number and duration without error-correction (frequency-shift keying, teleprinter)	FL	FLB	
B.3 Telegraphy using code with elements of the same number and duration with error-correction (frequency-shift keying, teleprinter)	FL	FLB	
B.4 Facsimile, quantized (weather chart)	F4	FLC	
B.5 Data transmission in quantized form	FL	FLD	
C. Emission of pulses			
C.1 A sequence of pulses modulated in code (telemetry signals)	FLC	Q1D	

Description	RR Art. 2 Symbol	Symbols proposed in this method	
		55 5, 6, 7	
III. A single channel using quantized information with the use of a modulating sub-carrier			
A. Emission predominantly amplitude-modulated			
A.1 Double sideband			
A.1.1 telegraphy using code with elements of differing numbers and/or durations for aural reception (Morse) (on-off keying of modulated carrier)	A2	A2A	
A.1.2 telegraphy using code with elements of differing numbers and/or durations for automatic reception (on-off keying of modulating sub-carrier)	A2	A2B	
A.2 Single-sideband, full carrier			
A.2.1 modulation by a continuous tone (standard frequency emission)	A2H	H2A	
A.2.2 telegraphy using code with elements of the same number and duration without error-correction (sequential single frequency code selective calling signal, Appendix 20C of the Radio Regulations)	A2H	H2B	



Description	RR Art. 2 Symbol	Symbols proposed in this method	
		55 5, 6, 7	
A.3 Single-sideband, suppressed carrier			
A.3.1 telegraphy using code with elements of differing numbers and/or durations for automatic reception (on-off keying of modulating sub-carrier)	A2J	J2B	
A.3.2 telegraphy using code with elements of the same number and duration with error-correction (narrow-band direct-printing telegraphy)	A2J	J2B	
B. Emission angle-modulated			
B.1 Frequency modulation			
B.1.1 telegraphy using code with elements of the same number and duration with error-correction (narrow-band direct-printing signal, frequency-shift keying of modulating sub-carrier)	F2	F2B	

Description	RR Art. 2 Symbol	Symbols proposed in this method	
		55 5, 6, 7	
IV. A single channel containing analogue information			
A. Emission predominantly amplitude-modulated			
A.1 Double-sideband			
A.1.1 sound channel of broadcasting quality	A3	A3E	
A.1.2 telephone channel with privacy device	A3	A3E	
A.1.3 telephone channel without privacy device	A3	A3E	
A.1.4 facsimile, analogue	A4	A3C	
A.2 Single-sideband, full carrier			
A.2.1 sound channel of broadcasting quality	A3H	H3E	
A.2.2 telephone channel of good commercial quality with privacy device	A3H	H3E	
A.3 Single-sideband, reduced carrier			
A.3.1 sound channel of broadcasting quality	A3A	R3E	

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17.

Description	RF Art. 2 Symbol	Symbols proposed in this method	
		§§ 5, 6, 7	
A.4 Single-sideband, suppressed carrier			
A.4.1 telephone channel with separate frequency modulated signals to control the level of modulated speech signals (limcompex)	AJU	JJE	
A.4.2 Analogue facsimile (frequency modulation of an audio frequency sub-carrier which modulates the main carrier in the single-sideband suppressed-carrier mode)	AJU	JJC	
A.5 Vestigial sideband			
A.5.1 sound channel of broadcasting quality	AJC	CJE	
A.5.2 monochrome television (video)	ASC	CJP	
A.5.3 colour television	ASC	CJF	

18.

Description	RF Art. 2 Symbol	Symbols proposed in this method	
		§§ 5, 6, 7	
B. Emission angle-modulated			
B.1 Frequency modulation			
B.1.1 sound channel of broadcasting quality	FJ	FJE	
B.1.2 telephone channel with privacy device	FJ	FJE	
B.1.3 analogue facsimile	F4	FJC	
B.1.4 Colour television (video)	F5	FJP	
C. Emission of pulses			
C.1 A sequence of pulses, modulated			
C.1.1 in amplitude			
C.1.1.1 telephone channel without privacy device	PJD	KJE	
C.1.2 in phase or position			
C.1.2.1 analogue data transmission	PIF	KJD	
C.1.2.2 analogue telecommand	PIF	KJD	



19.

Description	RS Art. 2 Symbol	Symbols proposed in this method	
		§§ 5, 6, 7	
V. Two or more channels containing quantized information operating simultaneously or in a pre-established sequence, all of which modulate the sub-carriers in frequency or phase			
A. Emission predominantly amplitude-modulated			
A.1 Double-sideband			
A.1.1 multichannel voice-frequency telegraphy with error-correction	AT	AAB	
A.2 Single-sideband, reduced carrier			
A.2.1 multichannel voice-frequency telegraphy with error-correction in which some channels are time-division multiplexed	ATA	RAB	
A.3 Independent sidebands			
A.3.1 Quantized facsimile in one sideband and multichannel voice-frequency telegraphy with error-correction and time-division multiplex in the other sideband	ASB	BAC	

20.

Description	RS Art. 2 Symbol	Symbols proposed in this method	
		§§ 5, 6, 7	
VI. Two or more channels containing quantized information operating simultaneously or in a pre-established sequence			
A. Emission predominantly amplitude-modulated			
A.1 Double-sideband (with two or more audio-frequency sub-carriers)			
A.1.1 standard frequency emission	A2	AEL	
B. Emission angle-modulated			
B.1 Frequency modulation			
B.1.1 Four-frequency duplex	FC	FEE	
B.2 Phase modulation			
B.2.1 Digital radio-relay system, in which the baseband is constituted by pulse-code modulated telephony channels in time-division multiplex and modulates the main carrier in quadrature phase-shift keying	F3	GFE	



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NOTICES

Description	RR Art. 2 Symbol	Symbols proposed in this method	
		55 5, 6, 7	
VII. Two or more channels containing analogue information operating simultaneously or in a pre-established sequence *			
A. Emission predominantly amplitude-modulated			
A.1 Single-sideband, full carrier			
A.1.1 several telephone channels in frequency-division multiplex	A3H	EJE	
A.2 Single-sideband, reduced-carrier			
A.2.1 sound channels of broadcasting quality	A3A	RJE	
A.3 Single-sideband, suppressed-carrier			
A.3.1 telephone channels of good commercial quality with privacy device	A3J	JJE	
A.4 Independent sidebands			
A.4.1 sound channels of broadcasting quality	A3B	EJE	
A.4.2 telephone channels of good commercial quality with privacy device	A3B	EJE	
A.4.3 two analogue facsimile signals using frequency modulation of sub-carriers	A4B	EJC	
A.4.4 telephone channels, each with separate frequency-modulated signals to control the level of demodulated speech signal (Lincompex)	A3B	EJE	

\* In the present set of examples, there are no examples of two or more channels containing analogue information in a pre-established sequence.

Description	RR Art. 2 Symbol	Symbols proposed in this method	
		55 5, 6, 7	
B. Emission, angle-modulated			
B.1 Frequency modulation			
B.1.1 stereophonic sound channel of broadcasting quality	F3	FJE	
B.1.2 telephone channels of good commercial quality	F3	FJE	
B.1.3 FTM-FM radio-relay system, multi-channel telephony in which the baseband is constituted by frequency-division multiplex and modulates the main carrier in frequency	F3	FJE	
B.1.4 colour television with four sound channels of broadcasting quality	F9	FJK	



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Description	RE Art. 2 Symbol	Symbols proposed in this method	
		55	5, 6, 7
A.2 Independent sideband A.2.1 several telegraph channels using code with elements of the same number and duration with error-correction together with several telephone channels with privacy devices	A3B		EPH
B. Emission, angle-modulated B.1 Frequency modulation B.1.1 several telegraph channels using code with elements of the same number and duration without error-correction (frequency-shift keying) together with several telephone channels	P9		PPH

Description	RE Art. 2 Symbol	Symbols proposed in this method	
		55	5, 6, 7
VIII. Composite systems, transmitting simultaneously or in a pre-established sequence one or more channels containing quantized information together with one or more channels containing analog information			
A. Emission predominantly amplitude-modulated			
A.1. Double-sideband			
A.1.1 telegraphy using code with elements of differing numbers and/or durations for automatic reception (on one sub-carrier) together with one telephone channel (on a second sub-carrier)	A9		APB
A.1.2 VOF with voice consisting of the main carrier modulated by: - a 30 Hz sub-carrier, - a carrier resulting from a 9950 Hz tone frequency-modulated by a 30 Hz tone, - a telephone channel, - a 1020 Hz keyed tone for optional Morse identification	A9		APL

[FR Doc. 77-14468 Filed 5-24-77; 8:45 am]

FEDERAL REGISTER, VOL. 42, NO. 101—WEDNESDAY, MAY 25, 1977

AR\_0033539







WEDNESDAY, MAY 25, 1977

PART VI



# THE PRESIDENT



## ENVIRONMENTAL PROTECTION

### EXOTIC ORGANISMS

Executive order restricting introduction into United States.. 26949

### FLOODPLAIN MANAGEMENT

Executive order..... 26951

### OFF-ROAD VEHICLES ON PUBLIC LANDS

Executive order restricting use..... 26959

### PROTECTION OF WETLANDS

Executive order..... 26961

### ENVIRONMENTAL IMPACT STATEMENTS

Executive order relating to responsibilities of Council on  
Environmental Quality..... 26967

Registered  
Federal  
Order







# presidential documents

## Title 3—The President

Executive Order 11987

May 24, 1977

### EXOTIC ORGANISMS

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the purposes and policies of the Lacey Act (18 U.S.C. 42) and the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), it is hereby ordered as follows:

#### Section 1. As used in this Order:

(a) "United States" means all of the several States, the District of Columbia, the Commonwealth of Puerto Rico, American Samoa, the Virgin Islands, Guam, and the Trust Territory of the Pacific Islands.

(b) "Introduction" means the release, escape, or establishment of an exotic species into a natural ecosystem.

(c) "Exotic species" means all species of plants and animals not naturally occurring, either presently or historically, in any ecosystem of the United States.

(d) "Native species" means all species of plants and animals naturally occurring, either presently or historically, in any ecosystem of the United States.

Sec. 2. (a) Executive agencies shall, to the extent permitted by law, restrict the introduction of exotic species into the natural ecosystems on lands and waters which they own, lease, or hold for purposes of administration; and, shall encourage the States, local governments, and private citizens to prevent the introduction of exotic species into natural ecosystems of the United States.

(b) Executive agencies, to the extent they have been authorized by statute to restrict the importation of exotic species, shall restrict the introduction of exotic species into any natural ecosystem of the United States.

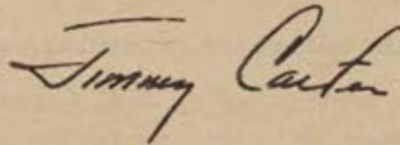


THE PRESIDENT

(c) Executive agencies shall, to the extent permitted by law, restrict the use of Federal funds, programs, or authorities used to export native species for the purpose of introducing such species into ecosystems outside the United States where they do not naturally occur.

(d) This Order does not apply to the introduction of any exotic species, or the export of any native species, if the Secretary of Agriculture or the Secretary of the Interior finds that such introduction or exportation will not have an adverse effect on natural ecosystems.

Sec. 3. The Secretary of the Interior, in consultation with the Secretary of Agriculture and the heads of other appropriate agencies, shall develop and implement, by rule or regulation, a system to standardize and simplify the requirements, procedures and other activities appropriate for implementing the provisions of this Order. The Secretary of the Interior shall ensure that such rules or regulations are in accord with the performance by other agencies of those functions vested by law, including this Order, in such agencies.



THE WHITE HOUSE,  
May 24, 1977

[FR Doc.77-15120 Filed 5-24-77;1:41 pm]



Executive Order 11988

May 24, 1977

## FLOODPLAIN MANAGEMENT

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), the National Flood Insurance Act of 1968, as amended (42 U.S.C. 4001 et seq.), and the Flood Disaster Protection Act of 1973 (Public Law 93-234, 87 Stat. 975), in order to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative, it is hereby ordered as follows:

Section 1. Each agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values served by floodplains in carrying out its responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

Sec. 2. In carrying out the activities described in Section 1 of this Order, each agency has a responsibility to evaluate the potential effects of any actions it may take in a floodplain; to ensure that its planning programs and budget requests reflect consideration of flood hazards and



floodplain management; and to prescribe procedures to implement the policies and requirements of this Order, as follows:

(a)(1) Before taking an action, each agency shall determine whether the proposed action will occur in a floodplain -- for major Federal actions significantly affecting the quality of the human environment, the evaluation required below will be included in any statement prepared under Section 102(2)(C) of the National Environmental Policy Act. This determination shall be made according to a Department of Housing and Urban Development (HUD) floodplain map or a more detailed map of an area, if available. If such maps are not available, the agency shall make a determination of the location of the floodplain based on the best available information. The Water Resources Council shall issue guidance on this information not later than October 1, 1977.

(2) If an agency has determined to, or proposes to, conduct, support, or allow an action to be located in a floodplain, the agency shall consider alternatives to avoid adverse effects and incompatible development in the floodplains. If the head of the agency finds that the only practicable alternative consistent with the law and with the policy set forth in this Order requires siting in a floodplain, the agency shall, prior to taking action,

- (i) design or modify its action in order to minimize potential harm to or within the floodplain, consistent with regulations issued in accord with Section 2(d) of this Order, and
- (ii) prepare and circulate a notice containing an explanation of why the action is proposed to be located in the floodplain.



(3) For programs subject to the Office of Management and Budget Circular A-95, the agency shall send the notice, not to exceed three pages in length including a location map, to the state and areawide A-95 clearinghouses for the geographic areas affected. The notice shall include:

(i) the reasons why the action is proposed to be located in a floodplain; (ii) a statement indicating whether the action conforms to applicable state or local floodplain protection standards and (iii) a list of the alternatives considered. Agencies shall endeavor to allow a brief comment period prior to taking any action.

(4) Each agency shall also provide opportunity for early public review of any plans or proposals for actions in floodplains, in accordance with Section 2(b) of Executive Order No. 11514, as amended, including the development of procedures to accomplish this objective for Federal actions whose impact is not significant enough to require the preparation of an environmental impact statement under Section 102(2)(C) of the National Environmental Policy Act of 1969, as amended.

(b) Any requests for new authorizations or appropriations transmitted to the Office of Management and Budget shall indicate, if an action to be proposed will be located in a floodplain, whether the proposed action is in accord with this Order.

(c) Each agency shall take floodplain management into account when formulating or evaluating any water and land use plans and shall require land and water resources use appropriate to the degree of hazard involved. Agencies shall include adequate provision for the evaluation and consideration of flood hazards in the regulations and operating procedures for the licenses, permits, loan or grants-in-aid programs that they administer. Agencies



shall also encourage and provide appropriate guidance to applicants to evaluate the effects of their proposals in floodplains prior to submitting applications for Federal licenses, permits, loans or grants.

(d) As allowed by law, each agency shall issue or amend existing regulations and procedures within one year to comply with this Order. These procedures shall incorporate the Unified National Program for Floodplain Management of the Water Resources Council, and shall explain the means that the agency will employ to pursue the nonhazardous use of riverine, coastal and other floodplains in connection with the activities under its authority. To the extent possible, existing processes, such as those of the Council on Environmental Quality and the Water Resources Council, shall be utilized to fulfill the requirements of this Order. Agencies shall prepare their procedures in consultation with the Water Resources Council, the Federal Insurance Administration, and the Council on Environmental Quality, and shall update such procedures as necessary.

Sec. 3. In addition to the requirements of Section 2, agencies with responsibilities for Federal real property and facilities shall take the following measures:

(a) The regulations and procedures established under Section 2(d) of this Order shall, at a minimum, require the construction of Federal structures and facilities to be in accordance with the standards and criteria and to be consistent with the intent of those promulgated under the National Flood Insurance Program. They shall deviate only to the extent that the standards of the Flood Insurance Program are demonstrably inappropriate for a given type of structure or facility.

(b) If, after compliance with the requirements of this Order, new construction of structures or



facilities are to be located in a floodplain, accepted floodproofing and other flood protection measures shall be applied to new construction or rehabilitation. To achieve flood protection, agencies shall, wherever practicable, elevate structures above the base flood level rather than filling in land.

(c) If property used by the general public has suffered flood damage or is located in an identified flood hazard area, the responsible agency shall provide on structures, and other places where appropriate, conspicuous delineation of past and probable flood height in order to enhance public awareness of and knowledge about flood hazards.

(d) When property in floodplains is proposed for lease, easement, right-of-way, or disposal to non-Federal public or private parties, the Federal agency shall (1) reference in the conveyance those uses that are restricted under identified Federal, State or local floodplain regulations; and (2) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successors, except where prohibited by law; or (3) withhold such properties from conveyance.

Sec. 4. In addition to any responsibilities under this Order and Sections 202 and 205 of the Flood Disaster Protection Act of 1973, as amended (42 U.S.C. 4106 and 4128), agencies which guarantee, approve, regulate, or insure any financial transaction which is related to an area located in a floodplain shall, prior to completing action on such transaction, inform any private parties participating in the transaction of the hazards of locating structures in the floodplain.



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Sec. 5. The head of each agency shall submit a report to the Council on Environmental Quality and to the Water Resources Council on June 30, 1978, regarding the status of their procedures and the impact of this Order on the agency's operations. Thereafter, the Water Resources Council shall periodically evaluate agency procedures and their effectiveness.

Sec. 6. As used in this Order:

(a) The term "agency" shall have the same meaning as the term "Executive agency" in Section 105 of Title 5 of the United States Code and shall include the military departments; the directives contained in this Order, however, are meant to apply only to those agencies which perform the activities described in Section 1 which are located in or affecting floodplains.

(b) The term "base flood" shall mean that flood which has a one percent or greater chance of occurrence in any given year.

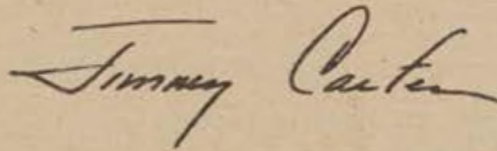
(c) The term "floodplain" shall mean the lowland and relatively flat areas adjoining inland and coastal waters including floodprone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year.

Sec. 7. Executive Order No. 11296 of August 10, 1966, is hereby revoked. All actions, procedures, and issuances taken under that Order and still in effect shall remain in effect until modified by appropriate authority under the terms of this Order.

Sec. 8. Nothing in this Order shall apply to assistance provided for emergency work essential to save lives and protect property and public health and safety, performed pursuant to Sections 305 and 306 of the Disaster Relief Act of 1974 (88 Stat. 148, 42 U.S.C. 5145 and 5146).



Sec. 9. To the extent the provisions of Section 2(a) of this Order are applicable to projects covered by Section 104(h) of the Housing and Community Development Act of 1974, as amended (88 Stat. 640, 42 U.S.C. 5304(h)), the responsibilities under those provisions may be assumed by the appropriate applicant, if the applicant has also assumed, with respect to such projects, all of the responsibilities for environmental review, decisionmaking, and action pursuant to the National Environmental Policy Act of 1969, as amended.



THE WHITE HOUSE,  
May 24, 1977

[FR Doc.77-15121 Filed 5-24-77;1:42 pm]







Executive Order 11989

May 24, 1977

## OFF-ROAD VEHICLES ON PUBLIC LANDS

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in order to clarify agency authority to define zones of use by off-road vehicles on public lands, in furtherance of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), Executive Order No. 11644 of February 8, 1972, is hereby amended as follows:

Section 1. Clause (B) of Section 2(3) of Executive Order No. 11644, setting forth an exclusion from the definition of off-road vehicles, is amended to read "(B) any fire, military, emergency or law enforcement vehicle when used for emergency purposes, and any combat or combat support vehicle when used for national defense purposes, and".

Sec. 2. Add the following new Section to Executive Order No. 11644:

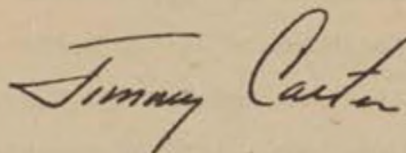
"Sec. 9. Special Protection of the Public Lands.

(a) Notwithstanding the provisions of Section 3 of this Order, the respective agency head shall, whenever he determines that the use of off-road vehicles will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat or cultural or historic resources of particular areas or trails of the public lands, immediately close such areas or trails to the type of off-road vehicle causing such effects, until such time as he determines that such adverse effects have been eliminated and that measures have been implemented to prevent future recurrence.



THE PRESIDENT

"(b) Each respective agency head is authorized to adopt the policy that portions of the public lands within his jurisdiction shall be closed to use by off-road vehicles except those areas or trails which are suitable and specifically designated as open to such use pursuant to Section 3 of this Order."



THE WHITE HOUSE,  
May 24, 1977

[FR Doc.77-15122 Filed 5-24-77;1:43 pm]



Executive Order 11990

May 24, 1977

## PROTECTION OF WETLANDS

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), in order to avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative, it is hereby ordered as follows:

Section 1. (a) Each agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for (1) acquiring, managing, and disposing of Federal lands and facilities; and (2) providing Federally undertaken, financed, or assisted construction and improvements; and (3) conducting Federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

(b) This Order does not apply to the issuance by Federal agencies of permits, licenses, or allocations to private parties for activities involving wetlands on non-Federal property.

Sec. 2. (a) In furtherance of Section 101(b)(3) of the National Environmental Policy Act of 1969 (42 U.S.C. 4331(b)(3)) to improve and coordinate Federal plans,



functions, programs and resources to the end that the Nation may attain the widest range of beneficial uses of the environment without degradation and risk to health or safety, each agency, to the extent permitted by law, shall avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. In making this finding the head of the agency may take into account economic, environmental and other pertinent factors.

(b) Each agency shall also provide opportunity for early public review of any plans or proposals for new construction in wetlands, in accordance with Section 2(b) of Executive Order No. 11514, as amended, including the development of procedures to accomplish this objective for Federal actions whose impact is not significant enough to require the preparation of an environmental impact statement under Section 102(2)(C) of the National Environmental Policy Act of 1969, as amended.

Sec. 3. Any requests for new authorizations or appropriations transmitted to the Office of Management and Budget shall indicate, if an action to be proposed will be located in wetlands, whether the proposed action is in accord with this Order.

Sec. 4. When Federally-owned wetlands or portions of wetlands are proposed for lease, easement, right-of-way or disposal to non-Federal public or private parties, the Federal agency shall (a) reference in the conveyance those uses that are restricted under identified Federal, State or local wetlands regulations; and (b) attach



other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law; or (c) withhold such properties from disposal.

Sec. 5. In carrying out the activities described in Section 1 of this Order, each agency shall consider factors relevant to a proposal's effect on the survival and quality of the wetlands. Among these factors are:

(a) public health, safety, and welfare, including water supply, quality, recharge and discharge; pollution; flood and storm hazards; and sediment and erosion;

(b) maintenance of natural systems, including conservation and long term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, wildlife, timber, and food and fiber resources; and

(c) other uses of wetlands in the public interest, including recreational, scientific, and cultural uses.

Sec. 6. As allowed by law, agencies shall issue or amend their existing procedures in order to comply with this Order. To the extent possible, existing processes, such as those of the Council on Environmental Quality and the Water Resources Council, shall be utilized to fulfill the requirements of this Order.

Sec. 7. As used in this Order:

(a) The term "agency" shall have the same meaning as the term "Executive agency" in Section 105 of Title 5 of the United States Code and shall include the military departments; the directives contained in this Order, however, are meant to apply only to those agencies which perform the activities described in Section 1 which are located in or affecting wetlands.



(b) The term "new construction" shall include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of this Order.

(c) The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

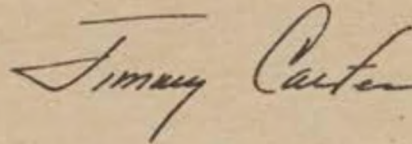
Sec. 8. This Order does not apply to projects presently under construction, or to projects for which all of the funds have been appropriated through Fiscal Year 1977, or to projects and programs for which a draft or final environmental impact statement will be filed prior to October 1, 1977. The provisions of Section 2 of this Order shall be implemented by each agency not later than October 1, 1977.

Sec. 9. Nothing in this Order shall apply to assistance provided for emergency work, essential to save lives and protect property and public health and safety, performed pursuant to Sections 305 and 306 of the Disaster Relief Act of 1974 (88 Stat. 148, 42 U.S.C. 5145 and 5146).

Sec. 10. To the extent the provisions of Sections 2 and 5 of this Order are applicable to projects covered



by Section 104(h) of the Housing and Community Development Act of 1974, as amended (88 Stat. 640, 42 U.S.C. 5304(h)), the responsibilities under those provisions may be assumed by the appropriate applicant, if the applicant has also assumed, with respect to such projects, all of the responsibilities for environmental review, decisionmaking, and action pursuant to the National Environmental Policy Act of 1969, as amended.



THE WHITE HOUSE,  
May 24, 1977

[FR Doc.77-15123 Filed 5-24-77;1:44 pm]

FEDERAL REGISTER, VOL. 42, NO. 101—WEDNESDAY, MAY 25, 1977

AR\_0033559







Executive Order 11991

May 24, 1977

RELATING TO PROTECTION AND ENHANCEMENT  
OF ENVIRONMENTAL QUALITY

By virtue of the authority vested in me by the Constitution and statutes of the United States of America, and as President of the United States of America, in furtherance of the purpose and policy of the National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.), the Environmental Quality Improvement Act of 1970 (42 U.S.C. 4371 et seq.), and Section 309 of the Clean Air Act, as amended (42 U.S.C. 1857h-7), it is hereby ordered as follows:

Section 1. Subsection (h) of Section 3 (relating to responsibilities of the Council on Environmental Quality) of Executive Order No. 11514, as amended, is revised to read as follows:

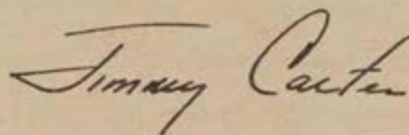
"(h) Issue regulations to Federal agencies for the implementation of the procedural provisions of the Act (42 U.S.C. 4332(2)). Such regulations shall be developed after consultation with affected agencies and after such public hearings as may be appropriate. They will be designed to make the environmental impact statement process more useful to decisionmakers and the public; and to reduce paperwork and the accumulation of extraneous background data, in order to emphasize the need to focus on real environmental issues and alternatives. They will require impact statements to be concise, clear, and to the point, and supported by evidence that agencies have made the necessary environmental analyses. The Council shall include in its regulations procedures (1) for the early preparation of environmental impact statements, and (2) for the referral to the Council of conflicts between



agencies concerning the implementation of the National Environmental Policy Act of 1969, as amended, and Section 309 of the Clean Air Act, as amended, for the Council's recommendation as to their prompt resolution."

Sec. 2. The following new subsection is added to Section 2 (relating to responsibilities of Federal agencies) of Executive Order No. 11514, as amended:

"(g) In carrying out their responsibilities under the Act and this Order, comply with the regulations issued by the Council except where such compliance would be inconsistent with statutory requirements."



THE WHITE HOUSE,  
May 24, 1977

[FR Doc.77-15124 Filed 5-24-77;1:45 pm]



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Wednesday, February 16, 1994

# Presidential Documents

Title 3—

Executive Order 12898 of February 11, 1994

The President

## Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

### Section 1—*Implementation.*

**1–101. *Agency Responsibilities.*** To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands.

**1–102. *Creation of an Interagency Working Group on Environmental Justice.*** (a) Within 3 months of the date of this order, the Administrator of the Environmental Protection Agency (“Administrator”) or the Administrator’s designee shall convene an interagency Federal Working Group on Environmental Justice (“Working Group”). The Working Group shall comprise the heads of the following executive agencies and offices, or their designees: (a) Department of Defense; (b) Department of Health and Human Services; (c) Department of Housing and Urban Development; (d) Department of Labor; (e) Department of Agriculture; (f) Department of Transportation; (g) Department of Justice; (h) Department of the Interior; (i) Department of Commerce; (j) Department of Energy; (k) Environmental Protection Agency; (l) Office of Management and Budget; (m) Office of Science and Technology Policy; (n) Office of the Deputy Assistant to the President for Environmental Policy; (o) Office of the Assistant to the President for Domestic Policy; (p) National Economic Council; (q) Council of Economic Advisers; and (r) such other Government officials as the President may designate. The Working Group shall report to the President through the Deputy Assistant to the President for Environmental Policy and the Assistant to the President for Domestic Policy.

(b) The Working Group shall: (1) provide guidance to Federal agencies on criteria for identifying disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;

(2) coordinate with, provide guidance to, and serve as a clearinghouse for, each Federal agency as it develops an environmental justice strategy as required by section 1–103 of this order, in order to ensure that the administration, interpretation and enforcement of programs, activities and policies are undertaken in a consistent manner;

(3) assist in coordinating research by, and stimulating cooperation among, the Environmental Protection Agency, the Department of Health and Human Services, the Department of Housing and Urban Development, and other agencies conducting research or other activities in accordance with section 3–3 of this order;

(4) assist in coordinating data collection, required by this order;

(5) examine existing data and studies on environmental justice;



(6) hold public meetings as required in section 5–502(d) of this order; and

(7) develop interagency model projects on environmental justice that evidence cooperation among Federal agencies.

**1–103. *Development of Agency Strategies.*** (a) Except as provided in section 6–605 of this order, each Federal agency shall develop an agency-wide environmental justice strategy, as set forth in subsections (b)–(e) of this section that identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. The environmental justice strategy shall list programs, policies, planning and public participation processes, enforcement, and/or rulemakings related to human health or the environment that should be revised to, at a minimum: (1) promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations; (2) ensure greater public participation; (3) improve research and data collection relating to the health of and environment of minority populations and low-income populations; and (4) identify differential patterns of consumption of natural resources among minority populations and low-income populations. In addition, the environmental justice strategy shall include, where appropriate, a timetable for undertaking identified revisions and consideration of economic and social implications of the revisions.

(b) Within 4 months of the date of this order, each Federal agency shall identify an internal administrative process for developing its environmental justice strategy, and shall inform the Working Group of the process.

(c) Within 6 months of the date of this order, each Federal agency shall provide the Working Group with an outline of its proposed environmental justice strategy.

(d) Within 10 months of the date of this order, each Federal agency shall provide the Working Group with its proposed environmental justice strategy.

(e) Within 12 months of the date of this order, each Federal agency shall finalize its environmental justice strategy and provide a copy and written description of its strategy to the Working Group. During the 12 month period from the date of this order, each Federal agency, as part of its environmental justice strategy, shall identify several specific projects that can be promptly undertaken to address particular concerns identified during the development of the proposed environmental justice strategy, and a schedule for implementing those projects.

(f) Within 24 months of the date of this order, each Federal agency shall report to the Working Group on its progress in implementing its agency-wide environmental justice strategy.

(g) Federal agencies shall provide additional periodic reports to the Working Group as requested by the Working Group.

**1–104. *Reports to the President.*** Within 14 months of the date of this order, the Working Group shall submit to the President, through the Office of the Deputy Assistant to the President for Environmental Policy and the Office of the Assistant to the President for Domestic Policy, a report that describes the implementation of this order, and includes the final environmental justice strategies described in section 1–103(e) of this order.

**Sec. 2–2. *Federal Agency Responsibilities for Federal Programs.*** Each Federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin.



**Sec. 3–3. *Research, Data Collection, and Analysis.***

**3–301. *Human Health and Environmental Research and Analysis.*** (a) Environmental human health research, whenever practicable and appropriate, shall include diverse segments of the population in epidemiological and clinical studies, including segments at high risk from environmental hazards, such as minority populations, low-income populations and workers who may be exposed to substantial environmental hazards.

(b) Environmental human health analyses, whenever practicable and appropriate, shall identify multiple and cumulative exposures.

(c) Federal agencies shall provide minority populations and low-income populations the opportunity to comment on the development and design of research strategies undertaken pursuant to this order.

**3–302. *Human Health and Environmental Data Collection and Analysis.*** To the extent permitted by existing law, including the Privacy Act, as amended (5 U.S.C. section 552a): (a) each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practical and appropriate, Federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;

(b) In connection with the development and implementation of agency strategies in section 1–103 of this order, each Federal agency, whenever practicable and appropriate, shall collect, maintain and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding facilities or sites expected to have a substantial environmental, human health, or economic effect on the surrounding populations, when such facilities or sites become the subject of a substantial Federal environmental administrative or judicial action. Such information shall be made available to the public, unless prohibited by law; and

(c) Each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding Federal facilities that are: (1) subject to the reporting requirements under the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. section 11001–11050 as mandated in Executive Order No. 12856; and (2) expected to have a substantial environmental, human health, or economic effect on surrounding populations. Such information shall be made available to the public, unless prohibited by law.

(d) In carrying out the responsibilities in this section, each Federal agency, whenever practicable and appropriate, shall share information and eliminate unnecessary duplication of efforts through the use of existing data systems and cooperative agreements among Federal agencies and with State, local, and tribal governments.

**Sec. 4–4. *Subsistence Consumption of Fish and Wildlife.***

**4–401. *Consumption Patterns.*** In order to assist in identifying the need for ensuring protection of populations with differential patterns of subsistence consumption of fish and wildlife, Federal agencies, whenever practicable and appropriate, shall collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. Federal agencies shall communicate to the public the risks of those consumption patterns.

**4–402. *Guidance.*** Federal agencies, whenever practicable and appropriate, shall work in a coordinated manner to publish guidance reflecting the latest scientific information available concerning methods for evaluating the human health risks associated with the consumption of pollutant-bearing fish or



wildlife. Agencies shall consider such guidance in developing their policies and rules.

**Sec. 5–5. *Public Participation and Access to Information.*** (a) The public may submit recommendations to Federal agencies relating to the incorporation of environmental justice principles into Federal agency programs or policies. Each Federal agency shall convey such recommendations to the Working Group.

(b) Each Federal agency may, whenever practicable and appropriate, translate crucial public documents, notices, and hearings relating to human health or the environment for limited English speaking populations.

(c) Each Federal agency shall work to ensure that public documents, notices, and hearings relating to human health or the environment are concise, understandable, and readily accessible to the public.

(d) The Working Group shall hold public meetings, as appropriate, for the purpose of fact-finding, receiving public comments, and conducting inquiries concerning environmental justice. The Working Group shall prepare for public review a summary of the comments and recommendations discussed at the public meetings.

**Sec. 6–6. *General Provisions.***

**6–601. *Responsibility for Agency Implementation.*** The head of each Federal agency shall be responsible for ensuring compliance with this order. Each Federal agency shall conduct internal reviews and take such other steps as may be necessary to monitor compliance with this order.

**6–602. *Executive Order No. 12250.*** This Executive order is intended to supplement but not supersede Executive Order No. 12250, which requires consistent and effective implementation of various laws prohibiting discriminatory practices in programs receiving Federal financial assistance. Nothing herein shall limit the effect or mandate of Executive Order No. 12250.

**6–603. *Executive Order No. 12875.*** This Executive order is not intended to limit the effect or mandate of Executive Order No. 12875.

**6–604. *Scope.*** For purposes of this order, Federal agency means any agency on the Working Group, and such other agencies as may be designated by the President, that conducts any Federal program or activity that substantially affects human health or the environment. Independent agencies are requested to comply with the provisions of this order.

**6–605. *Petitions for Exemptions.*** The head of a Federal agency may petition the President for an exemption from the requirements of this order on the grounds that all or some of the petitioning agency's programs or activities should not be subject to the requirements of this order.

**6–606. *Native American Programs.*** Each Federal agency responsibility set forth under this order shall apply equally to Native American programs. In addition, the Department of the Interior, in coordination with the Working Group, and, after consultation with tribal leaders, shall coordinate steps to be taken pursuant to this order that address Federally-recognized Indian Tribes.

**6–607. *Costs.*** Unless otherwise provided by law, Federal agencies shall assume the financial costs of complying with this order.

**6–608. *General.*** Federal agencies shall implement this order consistent with, and to the extent permitted by, existing law.

**6–609. *Judicial Review.*** This order is intended only to improve the internal management of the executive branch and is not intended to, nor does it create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person. This order shall not be construed to create any right to judicial review involving the compliance or noncompliance



of the United States, its agencies, its officers, or any other person with this order.

A handwritten signature in black ink, reading "William Clinton". The signature is written in a cursive, flowing style.

THE WHITE HOUSE,  
*February 11, 1994.*

[FR Citation 59 FR 7629]



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Vol. 82, No. 163

Thursday, August 24, 2017

# Presidential Documents

Title 3—

The President

Executive Order 13807 of August 15, 2017

## Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to ensure that the Federal environmental review and permitting process for infrastructure projects is coordinated, predictable, and transparent, it is hereby ordered as follows:

**Section 1. Purpose.** America needs increased infrastructure investment to strengthen our economy, enhance our competitiveness in world trade, create jobs and increase wages for our workers, and reduce the costs of goods and services for our families. The poor condition of America's infrastructure has been estimated to cost a typical American household thousands of dollars each year. Inefficiencies in current infrastructure project decisions, including management of environmental reviews and permit decisions or authorizations, have delayed infrastructure investments, increased project costs, and blocked the American people from enjoying improved infrastructure that would benefit our economy, society, and environment. More efficient and effective Federal infrastructure decisions can transform our economy, so the Federal Government, as a whole, must change the way it processes environmental reviews and authorization decisions.

**Sec. 2. Policy.** It is the policy of the Federal Government to:

- (a) safeguard our communities and maintain a healthy environment;
- (b) ensure that Federal authorities make informed decisions concerning the environmental impacts of infrastructure projects;
- (c) develop infrastructure in an environmentally sensitive manner;
- (d) provide transparency and accountability to the public regarding environmental review and authorization decisions;
- (e) be good stewards of public funds, including those used to develop infrastructure projects, and avoid duplicative and wasteful processes;
- (f) conduct environmental reviews and authorization processes in a coordinated, consistent, predictable, and timely manner in order to give public and private investors the confidence necessary to make funding decisions for new infrastructure projects;
- (g) speak with a coordinated voice when conducting environmental reviews and making authorization decisions; and
- (h) make timely decisions with the goal of completing all Federal environmental reviews and authorization decisions for major infrastructure projects within 2 years.

**Sec. 3. Definitions.** The terms of this order shall be applied consistently with those defined under 42 U.S.C. 4370m and implementing guidance to the maximum extent possible. The following definitions shall specifically apply:

- (a) "Authorization" means any license, permit, approval, finding, determination, or other administrative decision issued by a Federal department or agency (agency) that is required or authorized under Federal law in



order to site, construct, reconstruct, or commence operations of an infrastructure project, including any authorization under 42 U.S.C. 4370m(3).

(b) “CAP Goals” means Federal Government Priority Goals established by the Government Performance and Results Act (GPRA) Modernization Act of 2010, Public Law 111–352, 124 Stat. 3866, and commonly referred to as Cross-Agency Priority (CAP) Goals.

(c) “Federal Permitting Improvement Steering Council” or “FPISC” means the entity established under 42 U.S.C. 4370m–1.

(d) “Infrastructure project” means a project to develop the public and private physical assets that are designed to provide or support services to the general public in the following sectors: surface transportation, including roadways, bridges, railroads, and transit; aviation; ports, including navigational channels; water resources projects; energy production and generation, including from fossil, renewable, nuclear, and hydro sources; electricity transmission; broadband Internet; pipelines; stormwater and sewer infrastructure; drinking water infrastructure; and other sectors as may be determined by the FPISC.

(e) “Major infrastructure project” means an infrastructure project for which multiple authorizations by Federal agencies will be required to proceed with construction, the lead Federal agency has determined that it will prepare an environmental impact statement (EIS) under the National Environmental Policy Act (NEPA), 42 U.S.C. 4321 *et seq.*, and the project sponsor has identified the reasonable availability of funds sufficient to complete the project.

(f) “Permitting timetable” means an environmental review and authorization schedule, or other equivalent schedule, for a project or group of projects that identifies milestones—including intermediate and final completion dates for action by each agency on any Federal environmental review or authorization required for a project or group of projects—that is prepared by the lead Federal agency in consultation with all cooperating and participating agencies.

**Sec. 4. Agency Performance Accountability.** Federal agencies should follow transparent and coordinated processes for conducting environmental reviews and making authorization decisions. These processes must include early and open coordination among Federal, State, tribal, and local agencies and early engagement with the public. Holding Federal agencies accountable for their progress on implementing the policy set forth in section 2 of this order should, among other things, produce measurably better environmental outcomes with respect to infrastructure development.

(a) *Performance Priority Goals.*

(i) *CAP Goal.* A CAP Goal is a Federal tool for accelerating progress in priority areas that require active collaboration among multiple agencies to overcome organizational barriers and to achieve better performance than one agency could achieve on its own. Within 180 days of the date of this order, the Director of the Office of Management and Budget (OMB), in consultation with the FPISC, shall establish a CAP Goal on Infrastructure Permitting Modernization so that, where permitted by law:

(A) Federal environmental reviews and authorization processes for infrastructure projects are consistent, coordinated, and predictable; and

(B) the time for the Federal Government’s processing of environmental reviews and authorization decisions for new major infrastructure projects should be reduced to not more than an average of approximately 2 years, measured from the date of the publication of a notice of intent to prepare an environmental impact statement or other benchmark deemed appropriate by the Director of OMB.

(ii) *Agency Goals.* All Federal agencies with environmental review, authorization, or consultation responsibilities for infrastructure projects shall modify their Strategic Plans and Annual Performance Plans under the



GPRA Modernization Act of 2010 to include agency performance goals related to the completion of environmental reviews and authorizations for infrastructure projects consistent with the new CAP Goal on Infrastructure Permitting Modernization. The agencies shall integrate the achievement of these performance goals into appropriate agency personnel performance plans, such as those of the agency Chief Environmental Review and Permitting Officers (CERPOs) or other appropriate officials, consistent with guidance to be provided by OMB, in consultation with the Office of Personnel Management. Progress on these goals shall be reviewed and analyzed by agency leadership, pursuant to the GPRA Modernization Act of 2010.

(b) *Accountability.* Within 180 days of the establishment of the CAP Goal on Infrastructure Permitting Modernization, as described in subsection (a) of this section, or such longer period of time as determined by the Director of OMB, OMB, in consultation with the FPISC, shall issue guidance for establishing a performance accountability system to facilitate achievement of the CAP Goal.

(i) *Tracking of Major Infrastructure Projects.* The performance accountability system shall track each major infrastructure project. The performance accountability system shall include, at a minimum, assessments of the agency's performance with respect to each of the following areas, as applicable:

(A) whether major infrastructure projects are processed using the "One Federal Decision" mechanism, as described in subsection 5(b) of this order;

(B) whether major infrastructure projects have a permitting timetable;

(C) whether major infrastructure projects follow an effective process that automatically elevates instances in which permitting timetable milestones are missed or extended, or are anticipated to be missed or extended, to appropriate senior agency officials;

(D) whether agencies are meeting the established milestones in the permitting timetable;

(E) the time it takes to complete the processing of environmental reviews and authorizations for each major infrastructure project; and

(F) the costs of the environmental reviews and authorizations for each major infrastructure project.

(ii) *Scoring.* The accountability system shall include a scoring mechanism that shall follow, at a minimum, the following procedures:

(A) agencies will submit information to OMB, consistent with existing reporting mechanisms to the maximum extent possible, on the assessment areas described in subsection (b)(i) of this section;

(B) at least once per quarter, OMB will produce a scorecard of agency performance and overall progress toward achieving CAP Goal targets;

(C) where an agency's inability to meet a permitting timetable milestone results in a significant delay of the project timeline, after consulting with the project sponsor and relevant agencies, agencies will submit (based on OMB guidance) an estimate of the delay's costs to the project; and

(D) the Director of OMB will consider each agency's performance during budget formulation and determine whether appropriate penalties, including those authorized at 23 U.S.C. 139(h)(7) and 33 U.S.C. 2348(h)(5), must or should be imposed, to the extent required or permitted by law, for those that significantly fail to meet a permitting timetable milestone or in other situations deemed appropriate by the Director of OMB after considering the causes of any poor performance.

(iii) *Best Practices.* Agencies shall implement the techniques and strategies the FPISC annually identifies as best practices pursuant to 42 U.S.C. 4370m-1(c)(2)(B), as appropriate. The performance accountability system



shall track and score agencies on the incorporation and implementation of appropriate best practices for all infrastructure projects, including the implementation of such best practices at an agency's field level.

**Sec. 5. *Process Enhancements.*** In furtherance of the policy described in section 2 of this order, Federal agencies shall follow a more unified environmental review and authorization process.

(a) *Processing of Major Infrastructure Projects.* In processing environmental reviews and authorizations for major infrastructure projects, Federal agencies shall:

- (i) use "One Federal Decision" described in subsection (b) of this section;
- (ii) develop and follow a permitting timetable, which shall be reviewed and updated at least quarterly by the lead Federal agency in consultation with Federal cooperating and participating agencies; and
- (iii) follow an effective process that automatically elevates instances where a permitting timetable milestone is missed or extended, or is anticipated to be missed or extended, to appropriate senior agency officials of the lead Federal agency and the cooperating and participating Federal agency or agencies to which the milestone applies.

(b) *One Federal Decision.*

(i) Each major infrastructure project shall have a lead Federal agency, which shall be responsible for navigating the project through the Federal environmental review and authorization process, including the identification of a primary Federal point of contact at each Federal agency. All Federal cooperating and participating agencies shall identify points of contact for each project, cooperate with the lead Federal agency point of contact, and respond to all reasonable requests for information from the lead Federal agency in a timely manner.

(ii) With respect to the applicability of NEPA to a major infrastructure project, the Federal lead, cooperating, and participating agencies for each major infrastructure project shall all record any individual agency decision in one Record of Decision (ROD), which shall be coordinated by the lead Federal agency unless the project sponsor requests that agencies issue separate NEPA documents, the NEPA obligations of a cooperating or participating agency have already been satisfied, or the lead Federal agency determines that a single ROD would not best promote completion of the project's environmental review and authorization process. The Federal lead, cooperating, and participating agencies shall all agree to a permitting timetable that includes the completion dates for the ROD and the federally required authorizations for the project.

(iii) All Federal authorization decisions for the construction of a major infrastructure project shall be completed within 90 days of the issuance of a ROD by the lead Federal agency, provided that the final EIS includes an adequate level of detail to inform agency decisions pursuant to their specific statutory authority and requirements. The lead Federal agency may extend the 90-day deadline if the lead Federal agency determines that Federal law prohibits the agency from issuing its approval or permit within the 90-day period, the project sponsor requests that the permit or approval follow a different timeline, or the lead Federal agency determines that an extension would better promote completion of the project's environmental review and authorization process.

(iv) The Council on Environmental Quality (CEQ) and OMB shall develop the framework for implementing One Federal Decision, in consultation with the FPISC.

(A) The framework should be consistent with the model processes established under 42 U.S.C. 4370m-2, 23 U.S.C. 139, 33 U.S.C. 2348, the 2015 "Red Book" (officially entitled "Synchronizing Environmental Reviews for Transportation and Other Infrastructure Projects"), and CEQ guidance on efficient and timely environmental reviews under NEPA.



(B) The framework shall also include guidance on the development of permitting timetables by the lead Federal agencies, in collaboration with Federal cooperating and participating agencies. Permitting timetables shall identify estimated intermediate and final completion dates for all environmental reviews and authorizations that are reasonably anticipated as being needed for a project, including the process for granting extensions of any established dates. The guidance shall specify that lead Federal agencies need not include the estimated intermediate and final completion dates of any such reviews or authorizations until the design of a project has sufficiently advanced so that they can be developed. In such cases, the guidance shall instruct lead Federal agencies to estimate when the project's design will be advanced enough to determine such dates. The timelines shall account for any federally required decisions or permits that are assumed by, or delegated to, State, tribal, or local agencies and the extent to which any approval or permit to be issued by a Federal agency is dependent upon the issuance of such a decision or permit.

(C) CEQ and OMB shall also develop guidance for applying One Federal Decision whenever the lead agency is a State, tribal, or local agency exercising an assignment or delegation of an agency's NEPA responsibilities.

(c) *Dashboard*. All projects subject to 23 U.S.C. 139 and "covered projects" under 42 U.S.C. 4370m shall be tracked on the Dashboard established under 42 U.S.C. 4370m-2(b). Other projects or classes of projects subject to special environmental review and authorization streamlining processes similar to those referenced in this subsection may also be tracked on the Dashboard at the discretion of the FPISC Executive Director. The dates for milestones of all projects tracked on the Dashboard shall be updated monthly, or on another appropriate timeline as may be determined by the FPISC Executive Director.

(d) *Executive Order 13766*. For purposes of implementing Executive Order 13766 of January 24, 2017 (Expediting Environmental Reviews and Approvals for High Priority Infrastructure Projects), all infrastructure projects that meet the criteria for, and are subject to, 23 U.S.C. 139, 33 U.S.C. 2348, or 42 U.S.C. 4370m-4370m-12 shall qualify as high priority projects under Executive Order 13766. Other projects or classes of projects subject to special environmental review and authorization streamlining processes, similar to those referenced in this subsection as may be determined by the FPISC Executive Director in consultation with OMB and CEQ, shall also qualify as high priority infrastructure projects under Executive Order 13766. The CEQ Chairman's responsibilities under sections 2 and 3 of Executive Order 13766 shall be satisfied by referring the project to the FPISC Executive Director, the Secretary of Transportation, or the Assistant Secretary of the Army for Civil Works, as appropriate.

(e) *Council on Environmental Quality*.

(i) *Directives*. Within 30 days of the date of this order, the CEQ shall develop an initial list of actions it will take to enhance and modernize the Federal environmental review and authorization process. Such actions should include issuing such regulations, guidance, and directives as CEQ may deem necessary to:

(A) ensure optimal interagency coordination of environmental review and authorization decisions, including by providing for an expanded role and authorities for lead agencies, more clearly defined responsibilities for cooperating and participating agencies, and Government-wide applicability of NEPA decisions and analyses;

(B) ensure that environmental reviews and authorization decisions involving multiple agencies are conducted in a manner that is concurrent, synchronized, timely, and efficient;

(C) provide for agency use, to the maximum extent permitted by law, of environmental studies, analysis, and decisions conducted in support



of earlier Federal, State, tribal, or local environmental reviews or authorization decisions; and

(D) ensure that agencies apply NEPA in a manner that reduces unnecessary burdens and delays as much as possible, including by using CEQ's authority to interpret NEPA to simplify and accelerate the NEPA review process.

(ii) *Dispute Resolution.* Except where dispute resolution processes are otherwise provided for in law, including under 42 U.S.C. 4370m-2, or by Executive Order or other Presidential directive, upon request of a lead Federal agency, cooperating agency, or participating agency, CEQ may mediate interagency disputes arising between Federal agencies concerning Federal environmental review or authorization decisions for any infrastructure project pertaining to any environmental law, regulation, order or policy, and shall facilitate resolution of any conflicting positions of the relevant agencies.

(iii) *Agency Procedures.* CEQ shall form and lead an interagency working group, consisting of the Director of OMB, agency CERPOs, and such other representatives of agencies as CEQ deems appropriate. The working group shall review the NEPA implementing regulations and other environmental review and authorization processing policies of agencies that are members of the FPISC to identify impediments to efficient and effective environmental reviews and authorizations for infrastructure projects. The working group shall also identify those agencies that require an action plan to address identified impediments. Based on this review, agencies shall develop action plans that set forth the actions they will take and timelines for completing those actions, and they shall submit those action plans to CEQ and OMB for comment. Each agency's action plan shall, at a minimum, establish procedures for a regular review and update of categorical exclusions, where appropriate.

(f) *Federal Permitting Improvement Steering Council.*

(i) *Organizational Support.* Unless otherwise determined by the Director of OMB, the General Services Administration (GSA) shall provide necessary administrative and organizational support to the FPISC, including personnel, procurement, and budget support. The GSA Administrator, or the head of another agency designated by the Director of OMB, may delegate any authority to the FPISC Executive Director necessary for the operation and administration of the FPISC and the Office of the Executive Director, and the Executive Director may redelegate these authorities, as appropriate.

(ii) *Additional Duties.* In addition to the duties and responsibilities charged to the FPISC Executive Director under 42 U.S.C. 4370m-4370m-12 and this order, the FPISC Executive Director may, upon request of a FPISC member agency or a project sponsor, work with the lead agency or any cooperating and participating agencies to facilitate the environmental review and authorization process for any infrastructure project regardless of whether the project is a "covered project" under 42 U.S.C. 4370m, including by resolving disputes and promoting early coordination. The FPISC Executive Director, the Director of OMB, or the Chairman of CEQ may establish any appropriate policies or procedures concerning the FPISC Executive Director's facilitation of the environmental review and authorization process under this subsection. Agencies must cooperate with the FPISC Executive Director with respect to the implementation of these additional duties.

(g) *Energy Corridors.* The Departments of the Interior and Agriculture, as appropriate, shall be the lead agencies for facilitating the identification and designation of energy right-of-way corridors on Federal lands for Government-wide expedited environmental review for the development of energy infrastructure projects.

(h) The Department of the Interior shall provide to OMB a strategy and recommendations for a multi-agency reorganization effort that would further



the aims of this order. OMB, in consultation with the Department of the Interior, shall coordinate with the heads of other agencies affected to incorporate the strategy, as appropriate, into the comprehensive reorganization plan developed under Executive Order 13781 of March 13, 2017 (Comprehensive Plan for Reorganizing the Executive Branch).

**Sec. 6.** Executive Order 13690 of January 30, 2015 (Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input), is revoked.

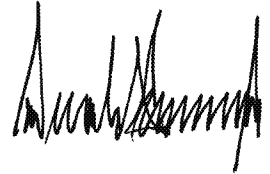
**Sec. 7. General Provisions.** (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department, agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.



THE WHITE HOUSE,  
August 15, 2017.



## Presidential Documents

### Executive Order 13990 of January 20, 2021

### Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

**Section 1. Policy.** Our Nation has an abiding commitment to empower our workers and communities; promote and protect our public health and the environment; and conserve our national treasures and monuments, places that secure our national memory. Where the Federal Government has failed to meet that commitment in the past, it must advance environmental justice. In carrying out this charge, the Federal Government must be guided by the best science and be protected by processes that ensure the integrity of Federal decision-making. It is, therefore, the policy of my Administration to listen to the science; to improve public health and protect our environment; to ensure access to clean air and water; to limit exposure to dangerous chemicals and pesticides; to hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; to reduce greenhouse gas emissions; to bolster resilience to the impacts of climate change; to restore and expand our national treasures and monuments; and to prioritize both environmental justice and the creation of the well-paying union jobs necessary to deliver on these goals.

To that end, this order directs all executive departments and agencies (agencies) to immediately review and, as appropriate and consistent with applicable law, take action to address the promulgation of Federal regulations and other actions during the last 4 years that conflict with these important national objectives, and to immediately commence work to confront the climate crisis.

**Sec. 2. Immediate Review of Agency Actions Taken Between January 20, 2017, and January 20, 2021.** (a) The heads of all agencies shall immediately review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (agency actions) promulgated, issued, or adopted between January 20, 2017, and January 20, 2021, that are or may be inconsistent with, or present obstacles to, the policy set forth in section 1 of this order. For any such actions identified by the agencies, the heads of agencies shall, as appropriate and consistent with applicable law, consider suspending, revising, or rescinding the agency actions. In addition, for the agency actions in the 4 categories set forth in subsections (i) through (iv) of this section, the head of the relevant agency, as appropriate and consistent with applicable law, shall consider publishing for notice and comment a proposed rule suspending, revising, or rescinding the agency action within the time frame specified.

(i) Reducing Methane Emissions in the Oil and Gas Sector: “Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Reconsideration,” 85 FR 57398 (September 15, 2020), by September 2021.

(ii) Establishing Ambitious, Job-Creating Fuel Economy Standards: “The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program,” 84 FR 51310 (September 27, 2019), by April 2021; and “The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks,” 85 FR 24174 (April 30,



2020), by July 2021. In considering whether to propose suspending, revising, or rescinding the latter rule, the agency should consider the views of representatives from labor unions, States, and industry.

(iii) Job-Creating Appliance- and Building-Efficiency Standards: “Energy Conservation Program for Appliance Standards: Procedures for Use in New or Revised Energy Conservation Standards and Test Procedures for Consumer Products and Commercial/Industrial Equipment,” 85 FR 8626 (February 14, 2020), with major revisions proposed by March 2021 and any remaining revisions proposed by June 2021; “Energy Conservation Program for Appliance Standards: Procedures for Evaluating Statutory Factors for Use in New or Revised Energy Conservation Standards,” 85 FR 50937 (August 19, 2020), with major revisions proposed by March 2021 and any remaining revisions proposed by June 2021; “Final Determination Regarding Energy Efficiency Improvements in the 2018 International Energy Conservation Code (IECC),” 84 FR 67435 (December 10, 2019), by May 2021; “Final Determination Regarding Energy Efficiency Improvements in ANSI/ASHRAE/IES Standard 90.1–2016: Energy Standard for Buildings, Except Low-Rise Residential Buildings,” 83 FR 8463 (February 27, 2018), by May 2021.

(iv) Protecting Our Air from Harmful Pollution: “National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units—Reconsideration of Supplemental Finding and Residual Risk and Technology Review,” 85 FR 31286 (May 22, 2020), by August 2021; “Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process,” 85 FR 84130 (December 23, 2020), as soon as possible; “Strengthening Transparency in Pivotal Science Underlying Significant Regulatory Actions and Influential Scientific Information,” 86 FR 469 (January 6, 2021), as soon as possible.

(b) Within 30 days of the date of this order, heads of agencies shall submit to the Director of the Office of Management and Budget (OMB) a preliminary list of any actions being considered pursuant to section (2)(a) of this order that would be completed by December 31, 2021, and that would be subject to OMB review. Within 90 days of the date of this order, heads of agencies shall submit to the Director of OMB an updated list of any actions being considered pursuant to section (2)(a) of this order that would be completed by December 31, 2025, and that would be subject to OMB review. At the time of submission to the Director of OMB, heads of agencies shall also send each list to the National Climate Advisor. In addition, and at the same time, heads of agencies shall send to the National Climate Advisor a list of additional actions being considered pursuant to section (2)(a) of this order that would not be subject to OMB review.

(c) Heads of agencies shall, as appropriate and consistent with applicable law, consider whether to take any additional agency actions to fully enforce the policy set forth in section 1 of this order. With respect to the Administrator of the Environmental Protection Agency, the following specific actions should be considered:

(i) proposing new regulations to establish comprehensive standards of performance and emission guidelines for methane and volatile organic compound emissions from existing operations in the oil and gas sector, including the exploration and production, transmission, processing, and storage segments, by September 2021; and

(ii) proposing a Federal Implementation Plan in accordance with the Environmental Protection Agency’s “Findings of Failure To Submit State Implementation Plan Revisions in Response to the 2016 Oil and Natural Gas Industry Control Techniques Guidelines for the 2008 Ozone National Ambient Air Quality Standards (NAAQS) and for States in the Ozone Transport Region,” 85 FR 72963 (November 16, 2020), for California, Connecticut, New York, Pennsylvania, and Texas by January 2022.



(d) The Attorney General may, as appropriate and consistent with applicable law, provide notice of this order and any actions taken pursuant to section 2(a) of this order to any court with jurisdiction over pending litigation related to those agency actions identified pursuant to section (2)(a) of this order, and may, in his discretion, request that the court stay or otherwise dispose of litigation, or seek other appropriate relief consistent with this order, until the completion of the processes described in this order.

(e) In carrying out the actions directed in this section, heads of agencies shall seek input from the public and stakeholders, including State local, Tribal, and territorial officials, scientists, labor unions, environmental advocates, and environmental justice organizations.

**Sec. 3. *Restoring National Monuments.*** (a) The Secretary of the Interior, as appropriate and consistent with applicable law, including the Antiquities Act, 54 U.S.C. 320301 *et seq.*, shall, in consultation with the Attorney General, the Secretaries of Agriculture and Commerce, the Chair of the Council on Environmental Quality, and Tribal governments, conduct a review of the monument boundaries and conditions that were established by Proclamation 9681 of December 4, 2017 (Modifying the Bears Ears National Monument); Proclamation 9682 of December 4, 2017 (Modifying the Grand Staircase-Escalante National Monument); and Proclamation 10049 of June 5, 2020 (Modifying the Northeast Canyons and Seamounts Marine National Monument), to determine whether restoration of the monument boundaries and conditions that existed as of January 20, 2017, would be appropriate.

(b) Within 60 days of the date of this order, the Secretary of the Interior shall submit a report to the President summarizing the findings of the review conducted pursuant to subsection (a), which shall include recommendations for such Presidential actions or other actions consistent with law as the Secretary may consider appropriate to carry out the policy set forth in section 1 of this order.

(c) The Attorney General may, as appropriate and consistent with applicable law, provide notice of this order to any court with jurisdiction over pending litigation related to the Grand Staircase-Escalante, Bears Ears, and Northeast Canyons and Seamounts Marine National Monuments, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, pending the completion of the actions described in subsection (a) of this section.

**Sec. 4. *Arctic Refuge.*** (a) In light of the alleged legal deficiencies underlying the program, including the inadequacy of the environmental review required by the National Environmental Policy Act, the Secretary of the Interior shall, as appropriate and consistent with applicable law, place a temporary moratorium on all activities of the Federal Government relating to the implementation of the Coastal Plain Oil and Gas Leasing Program, as established by the Record of Decision signed August 17, 2020, in the Arctic National Wildlife Refuge. The Secretary shall review the program and, as appropriate and consistent with applicable law, conduct a new, comprehensive analysis of the potential environmental impacts of the oil and gas program.

(b) In Executive Order 13754 of December 9, 2016 (Northern Bering Sea Climate Resilience), and in the Presidential Memorandum of December 20, 2016 (Withdrawal of Certain Portions of the United States Arctic Outer Continental Shelf From Mineral Leasing), President Obama withdrew areas in Arctic waters and the Bering Sea from oil and gas drilling and established the Northern Bering Sea Climate Resilience Area. Subsequently, the order was revoked and the memorandum was amended in Executive Order 13795 of April 28, 2017 (Implementing an America-First Offshore Energy Strategy). Pursuant to section 12(a) of the Outer Continental Shelf Lands Act, 43 U.S.C. 1341(a), Executive Order 13754 and the Presidential Memorandum of December 20, 2016, are hereby reinstated in their original form, thereby restoring the original withdrawal of certain offshore areas in Arctic waters and the Bering Sea from oil and gas drilling.



(c) The Attorney General may, as appropriate and consistent with applicable law, provide notice of this order to any court with jurisdiction over pending litigation related to the Coastal Plain Oil and Gas Leasing Program in the Arctic National Wildlife Refuge and other related programs, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, pending the completion of the actions described in subsection (a) of this section.

**Sec. 5. *Accounting for the Benefits of Reducing Climate Pollution.*** (a) It is essential that agencies capture the full costs of greenhouse gas emissions as accurately as possible, including by taking global damages into account. Doing so facilitates sound decision-making, recognizes the breadth of climate impacts, and supports the international leadership of the United States on climate issues. The “social cost of carbon” (SCC), “social cost of nitrous oxide” (SCN), and “social cost of methane” (SCM) are estimates of the monetized damages associated with incremental increases in greenhouse gas emissions. They are intended to include changes in net agricultural productivity, human health, property damage from increased flood risk, and the value of ecosystem services. An accurate social cost is essential for agencies to accurately determine the social benefits of reducing greenhouse gas emissions when conducting cost-benefit analyses of regulatory and other actions.

(b) There is hereby established an Interagency Working Group on the Social Cost of Greenhouse Gases (the “Working Group”). The Chair of the Council of Economic Advisers, Director of OMB, and Director of the Office of Science and Technology Policy shall serve as Co-Chairs of the Working Group.

(i) **Membership.** The Working Group shall also include the following other officers, or their designees: the Secretary of the Treasury; the Secretary of the Interior; the Secretary of Agriculture; the Secretary of Commerce; the Secretary of Health and Human Services; the Secretary of Transportation; the Secretary of Energy; the Chair of the Council on Environmental Quality; the Administrator of the Environmental Protection Agency; the Assistant to the President and National Climate Advisor; and the Assistant to the President for Economic Policy and Director of the National Economic Council.

(ii) **Mission and Work.** The Working Group shall, as appropriate and consistent with applicable law:

(A) publish an interim SCC, SCN, and SCM within 30 days of the date of this order, which agencies shall use when monetizing the value of changes in greenhouse gas emissions resulting from regulations and other relevant agency actions until final values are published;

(B) publish a final SCC, SCN, and SCM by no later than January 2022;

(C) provide recommendations to the President, by no later than September 1, 2021, regarding areas of decision-making, budgeting, and procurement by the Federal Government where the SCC, SCN, and SCM should be applied;

(D) provide recommendations, by no later than June 1, 2022, regarding a process for reviewing, and, as appropriate, updating, the SCC, SCN, and SCM to ensure that these costs are based on the best available economics and science; and

(E) provide recommendations, to be published with the final SCC, SCN, and SCM under subparagraph (A) if feasible, and in any event by no later than June 1, 2022, to revise methodologies for calculating the SCC, SCN, and SCM, to the extent that current methodologies do not adequately take account of climate risk, environmental justice, and intergenerational equity.



(iii) Methodology. In carrying out its activities, the Working Group shall consider the recommendations of the National Academies of Science, Engineering, and Medicine as reported in *Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide* (2017) and other pertinent scientific literature; solicit public comment; engage with the public and stakeholders; seek the advice of ethics experts; and ensure that the SCC, SCN, and SCM reflect the interests of future generations in avoiding threats posed by climate change.

**Sec. 6. *Revoking the March 2019 Permit for the Keystone XL Pipeline.*** (a) On March 29, 2019, the President granted to TransCanada Keystone Pipeline, L.P. a Presidential permit (the “Permit”) to construct, connect, operate, and maintain pipeline facilities at the international border of the United States and Canada (the “Keystone XL pipeline”), subject to express conditions and potential revocation in the President’s sole discretion. The Permit is hereby revoked in accordance with Article 1(1) of the Permit.

(b) In 2015, following an exhaustive review, the Department of State and the President determined that approving the proposed Keystone XL pipeline would not serve the U.S. national interest. That analysis, in addition to concluding that the significance of the proposed pipeline for our energy security and economy is limited, stressed that the United States must prioritize the development of a clean energy economy, which will in turn create good jobs. The analysis further concluded that approval of the proposed pipeline would undermine U.S. climate leadership by undercutting the credibility and influence of the United States in urging other countries to take ambitious climate action.

(c) Climate change has had a growing effect on the U.S. economy, with climate-related costs increasing over the last 4 years. Extreme weather events and other climate-related effects have harmed the health, safety, and security of the American people and have increased the urgency for combatting climate change and accelerating the transition toward a clean energy economy. The world must be put on a sustainable climate pathway to protect Americans and the domestic economy from harmful climate impacts, and to create well-paying union jobs as part of the climate solution.

(d) The Keystone XL pipeline disserves the U.S. national interest. The United States and the world face a climate crisis. That crisis must be met with action on a scale and at a speed commensurate with the need to avoid setting the world on a dangerous, potentially catastrophic, climate trajectory. At home, we will combat the crisis with an ambitious plan to build back better, designed to both reduce harmful emissions and create good clean-energy jobs. Our domestic efforts must go hand in hand with U.S. diplomatic engagement. Because most greenhouse gas emissions originate beyond our borders, such engagement is more necessary and urgent than ever. The United States must be in a position to exercise vigorous climate leadership in order to achieve a significant increase in global climate action and put the world on a sustainable climate pathway. Leaving the Keystone XL pipeline permit in place would not be consistent with my Administration’s economic and climate imperatives.

**Sec. 7. *Other Revocations.*** (a) Executive Order 13766 of January 24, 2017 (Expediting Environmental Reviews and Approvals For High Priority Infrastructure Projects), Executive Order 13778 of February 28, 2017 (Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the “Waters of the United States” Rule), Executive Order 13783 of March 28, 2017 (Promoting Energy Independence and Economic Growth), Executive Order 13792 of April 26, 2017 (Review of Designations Under the Antiquities Act), Executive Order 13795 of April 28, 2017 (Implementing an America-First Offshore Energy Strategy), Executive Order 13868 of April 10, 2019 (Promoting Energy Infrastructure and Economic Growth), and Executive Order 13927 of June 4, 2020 (Accelerating the Nation’s Economic Recovery from the COVID–19 Emergency by Expediting Infrastructure Investments and Other Activities), are hereby revoked. Executive Order 13834 of May 17, 2018



(Efficient Federal Operations), is hereby revoked except for sections 6, 7, and 11.

(b) Executive Order 13807 of August 15, 2017 (Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects), is hereby revoked. The Director of OMB and the Chair of the Council on Environmental Quality shall jointly consider whether to recommend that a replacement order be issued.

(c) Executive Order 13920 of May 1, 2020 (Securing the United States Bulk-Power System), is hereby suspended for 90 days. The Secretary of Energy and the Director of OMB shall jointly consider whether to recommend that a replacement order be issued.

(d) The Presidential Memorandum of April 12, 2018 (Promoting Domestic Manufacturing and Job Creation Policies and Procedures Relating to Implementation of Air Quality Standards), the Presidential Memorandum of October 19, 2018 (Promoting the Reliable Supply and Delivery of Water in the West), and the Presidential Memorandum of February 19, 2020 (Developing and Delivering More Water Supplies in California), are hereby revoked.

(e) The Council on Environmental Quality shall rescind its draft guidance entitled, "Draft National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions," 84 FR 30097 (June 26, 2019). The Council, as appropriate and consistent with applicable law, shall review, revise, and update its final guidance entitled, "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," 81 FR 51866 (August 5, 2016).

(f) The Director of OMB and the heads of agencies shall promptly take steps to rescind any orders, rules, regulations, guidelines, or policies, or portions thereof, including, if necessary, by proposing such rescissions through notice-and-comment rulemaking, implementing or enforcing the Executive Orders, Presidential Memoranda, and draft guidance identified in this section, as appropriate and consistent with applicable law.

**Sec. 8. General Provisions.** (a) Nothing in this order shall be construed to impair or otherwise affect:

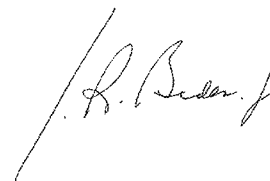
(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented in a manner consistent with applicable law and subject to the availability of appropriations.



(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

A handwritten signature in black ink, appearing to read "R. B. Biden, Jr.", is written over a diagonal line that extends from the upper right towards the center of the page.

THE WHITE HOUSE,  
*January 20, 2021.*

[FR Doc. 2021-01765  
Filed 1-22-21; 11:15 am]  
Billing code 3295-F1-P



## Presidential Documents

Executive Order 14008 of January 27, 2021

### Tackling the Climate Crisis at Home and Abroad

The United States and the world face a profound climate crisis. We have a narrow moment to pursue action at home and abroad in order to avoid the most catastrophic impacts of that crisis and to seize the opportunity that tackling climate change presents. Domestic action must go hand in hand with United States international leadership, aimed at significantly enhancing global action. Together, we must listen to science and meet the moment.

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

#### **PART I—PUTTING THE CLIMATE CRISIS AT THE CENTER OF UNITED STATES FOREIGN POLICY AND NATIONAL SECURITY**

**Section 101. *Policy.*** United States international engagement to address climate change—which has become a climate crisis—is more necessary and urgent than ever. The scientific community has made clear that the scale and speed of necessary action is greater than previously believed. There is little time left to avoid setting the world on a dangerous, potentially catastrophic, climate trajectory. Responding to the climate crisis will require both significant short-term global reductions in greenhouse gas emissions and net-zero global emissions by mid-century or before.

It is the policy of my Administration that climate considerations shall be an essential element of United States foreign policy and national security. The United States will work with other countries and partners, both bilaterally and multilaterally, to put the world on a sustainable climate pathway. The United States will also move quickly to build resilience, both at home and abroad, against the impacts of climate change that are already manifest and will continue to intensify according to current trajectories.

**Sec. 102. *Purpose.*** This order builds on and reaffirms actions my Administration has already taken to place the climate crisis at the forefront of this Nation's foreign policy and national security planning, including submitting the United States instrument of acceptance to rejoin the Paris Agreement. In implementing—and building upon—the Paris Agreement's three overarching objectives (a safe global temperature, increased climate resilience, and financial flows aligned with a pathway toward low greenhouse gas emissions and climate-resilient development), the United States will exercise its leadership to promote a significant increase in global climate ambition to meet the climate challenge. In this regard:

(a) I will host an early Leaders' Climate Summit aimed at raising climate ambition and making a positive contribution to the 26th United Nations Climate Change Conference of the Parties (COP26) and beyond.

(b) The United States will reconvene the Major Economies Forum on Energy and Climate, beginning with the Leaders' Climate Summit. In cooperation with the members of that Forum, as well as with other partners as appropriate, the United States will pursue green recovery efforts, initiatives to advance the clean energy transition, sectoral decarbonization, and alignment of financial flows with the objectives of the Paris Agreement, including with respect to coal financing, nature-based solutions, and solutions to other climate-related challenges.



(c) I have created a new Presidentially appointed position, the Special Presidential Envoy for Climate, to elevate the issue of climate change and underscore the commitment my Administration will make toward addressing it.

(d) Recognizing that climate change affects a wide range of subjects, it will be a United States priority to press for enhanced climate ambition and integration of climate considerations across a wide range of international fora, including the Group of Seven (G7), the Group of Twenty (G20), and fora that address clean energy, aviation, shipping, the Arctic, the ocean, sustainable development, migration, and other relevant topics. The Special Presidential Envoy for Climate and others, as appropriate, are encouraged to promote innovative approaches, including international multi-stakeholder initiatives. In addition, my Administration will work in partnership with States, localities, Tribes, territories, and other United States stakeholders to advance United States climate diplomacy.

(e) The United States will immediately begin the process of developing its nationally determined contribution under the Paris Agreement. The process will include analysis and input from relevant executive departments and agencies (agencies), as well as appropriate outreach to domestic stakeholders. The United States will aim to submit its nationally determined contribution in advance of the Leaders' Climate Summit.

(f) The United States will also immediately begin to develop a climate finance plan, making strategic use of multilateral and bilateral channels and institutions, to assist developing countries in implementing ambitious emissions reduction measures, protecting critical ecosystems, building resilience against the impacts of climate change, and promoting the flow of capital toward climate-aligned investments and away from high-carbon investments. The Secretary of State and the Secretary of the Treasury, in coordination with the Special Presidential Envoy for Climate, shall lead a process to develop this plan, with the participation of the Administrator of the United States Agency for International Development (USAID), the Chief Executive Officer of the United States International Development Finance Corporation (DFC), the Chief Executive Officer of the Millennium Challenge Corporation, the Director of the United States Trade and Development Agency, the Director of the Office of Management and Budget, and the head of any other agency providing foreign assistance and development financing, as appropriate. The Secretary of State and the Secretary of the Treasury shall submit the plan to the President, through the Assistant to the President for National Security Affairs and the Assistant to the President for Economic Policy, within 90 days of the date of this order.

(g) The Secretary of the Treasury shall:

(i) ensure that the United States is present and engaged in relevant international fora and institutions that are working on the management of climate-related financial risks;

(ii) develop a strategy for how the voice and vote of the United States can be used in international financial institutions, including the World Bank Group and the International Monetary Fund, to promote financing programs, economic stimulus packages, and debt relief initiatives that are aligned with and support the goals of the Paris Agreement; and

(iii) develop, in collaboration with the Secretary of State, the Administrator of USAID, and the Chief Executive Officer of the DFC, a plan for promoting the protection of the Amazon rainforest and other critical ecosystems that serve as global carbon sinks, including through market-based mechanisms.

(h) The Secretary of State, the Secretary of the Treasury, and the Secretary of Energy shall work together and with the Export-Import Bank of the United States, the Chief Executive Officer of the DFC, and the heads of other agencies and partners, as appropriate, to identify steps through which the United States can promote ending international financing of carbon-



intensive fossil fuel-based energy while simultaneously advancing sustainable development and a green recovery, in consultation with the Assistant to the President for National Security Affairs.

(i) The Secretary of Energy, in cooperation with the Secretary of State and the heads of other agencies, as appropriate, shall identify steps through which the United States can intensify international collaborations to drive innovation and deployment of clean energy technologies, which are critical for climate protection.

(j) The Secretary of State shall prepare, within 60 days of the date of this order, a transmittal package seeking the Senate's advice and consent to ratification of the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, regarding the phasedown of the production and consumption of hydrofluorocarbons.

**Sec. 103. *Prioritizing Climate in Foreign Policy and National Security.*** To ensure that climate change considerations are central to United States foreign policy and national security:

(a) Agencies that engage in extensive international work shall develop, in coordination with the Special Presidential Envoy for Climate, and submit to the President, through the Assistant to the President for National Security Affairs, within 90 days of the date of this order, strategies and implementation plans for integrating climate considerations into their international work, as appropriate and consistent with applicable law. These strategies and plans should include an assessment of:

(i) climate impacts relevant to broad agency strategies in particular countries or regions;

(ii) climate impacts on their agency-managed infrastructure abroad (e.g., embassies, military installations), without prejudice to existing requirements regarding assessment of such infrastructure;

(iii) how the agency intends to manage such impacts or incorporate risk mitigation into its installation master plans; and

(iv) how the agency's international work, including partner engagement, can contribute to addressing the climate crisis.

(b) The Director of National Intelligence shall prepare, within 120 days of the date of this order, a National Intelligence Estimate on the national and economic security impacts of climate change.

(c) The Secretary of Defense, in coordination with the Secretary of Commerce, through the Administrator of the National Oceanic and Atmospheric Administration, the Chair of the Council on Environmental Quality, the Administrator of the Environmental Protection Agency, the Director of National Intelligence, the Director of the Office of Science and Technology Policy, the Administrator of the National Aeronautics and Space Administration, and the heads of other agencies as appropriate, shall develop and submit to the President, within 120 days of the date of this order, an analysis of the security implications of climate change (Climate Risk Analysis) that can be incorporated into modeling, simulation, war-gaming, and other analyses.

(d) The Secretary of Defense and the Chairman of the Joint Chiefs of Staff shall consider the security implications of climate change, including any relevant information from the Climate Risk Analysis described in subsection (c) of this section, in developing the National Defense Strategy, Defense Planning Guidance, Chairman's Risk Assessment, and other relevant strategy, planning, and programming documents and processes. Starting in January 2022, the Secretary of Defense and the Chairman of the Joint Chiefs of Staff shall provide an annual update, through the National Security Council, on the progress made in incorporating the security implications of climate change into these documents and processes.

(e) The Secretary of Homeland Security shall consider the implications of climate change in the Arctic, along our Nation's borders, and to National



Critical Functions, including any relevant information from the Climate Risk Analysis described in subsection (c) of this section, in developing relevant strategy, planning, and programming documents and processes. Starting in January 2022, the Secretary of Homeland Security shall provide an annual update, through the National Security Council, on the progress made in incorporating the homeland security implications of climate change into these documents and processes.

**Sec. 104. Reinstatement.** The Presidential Memorandum of September 21, 2016 (Climate Change and National Security), is hereby reinstated.

## **PART II—TAKING A GOVERNMENT-WIDE APPROACH TO THE CLIMATE CRISIS**

**Sec. 201. Policy.** Even as our Nation emerges from profound public health and economic crises borne of a pandemic, we face a climate crisis that threatens our people and communities, public health and economy, and, starkly, our ability to live on planet Earth. Despite the peril that is already evident, there is promise in the solutions—opportunities to create well-paying union jobs to build a modern and sustainable infrastructure, deliver an equitable, clean energy future, and put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050.

We must listen to science—and act. We must strengthen our clean air and water protections. We must hold polluters accountable for their actions. We must deliver environmental justice in communities all across America. The Federal Government must drive assessment, disclosure, and mitigation of climate pollution and climate-related risks in every sector of our economy, marshaling the creativity, courage, and capital necessary to make our Nation resilient in the face of this threat. Together, we must combat the climate crisis with bold, progressive action that combines the full capacity of the Federal Government with efforts from every corner of our Nation, every level of government, and every sector of our economy.

It is the policy of my Administration to organize and deploy the full capacity of its agencies to combat the climate crisis to implement a Government-wide approach that reduces climate pollution in every sector of the economy; increases resilience to the impacts of climate change; protects public health; conserves our lands, waters, and biodiversity; delivers environmental justice; and spurs well-paying union jobs and economic growth, especially through innovation, commercialization, and deployment of clean energy technologies and infrastructure. Successfully meeting these challenges will require the Federal Government to pursue such a coordinated approach from planning to implementation, coupled with substantive engagement by stakeholders, including State, local, and Tribal governments.

**Sec. 202. White House Office of Domestic Climate Policy.** There is hereby established the White House Office of Domestic Climate Policy (Climate Policy Office) within the Executive Office of the President, which shall coordinate the policy-making process with respect to domestic climate-policy issues; coordinate domestic climate-policy advice to the President; ensure that domestic climate-policy decisions and programs are consistent with the President's stated goals and that those goals are being effectively pursued; and monitor implementation of the President's domestic climate-policy agenda. The Climate Policy Office shall have a staff headed by the Assistant to the President and National Climate Advisor (National Climate Advisor) and shall include the Deputy Assistant to the President and Deputy National Climate Advisor. The Climate Policy Office shall have such staff and other assistance as may be necessary to carry out the provisions of this order, subject to the availability of appropriations, and may work with established or ad hoc committees or interagency groups. All agencies shall cooperate with the Climate Policy Office and provide such information, support, and assistance to the Climate Policy Office as it may request, as appropriate and consistent with applicable law.



**Sec. 203. *National Climate Task Force.*** There is hereby established a National Climate Task Force (Task Force). The Task Force shall be chaired by the National Climate Advisor.

(a) Membership. The Task Force shall consist of the following additional members:

- (i) the Secretary of the Treasury;
- (ii) the Secretary of Defense;
- (iii) the Attorney General;
- (iv) the Secretary of the Interior;
- (v) the Secretary of Agriculture;
- (vi) the Secretary of Commerce;
- (vii) the Secretary of Labor;
- (viii) the Secretary of Health and Human Services;
- (ix) the Secretary of Housing and Urban Development;
- (x) the Secretary of Transportation;
- (xi) the Secretary of Energy;
- (xii) the Secretary of Homeland Security;
- (xiii) the Administrator of General Services;
- (xiv) the Chair of the Council on Environmental Quality;
- (xv) the Administrator of the Environmental Protection Agency;
- (xvi) the Director of the Office of Management and Budget;
- (xvii) the Director of the Office of Science and Technology Policy;
- (xviii) the Assistant to the President for Domestic Policy;
- (xix) the Assistant to the President for National Security Affairs;
- (xx) the Assistant to the President for Homeland Security and Counterterrorism; and
- (xxi) the Assistant to the President for Economic Policy.

(b) Mission and Work. The Task Force shall facilitate the organization and deployment of a Government-wide approach to combat the climate crisis. This Task Force shall facilitate planning and implementation of key Federal actions to reduce climate pollution; increase resilience to the impacts of climate change; protect public health; conserve our lands, waters, oceans, and biodiversity; deliver environmental justice; and spur well-paying union jobs and economic growth. As necessary and appropriate, members of the Task Force will engage on these matters with State, local, Tribal, and territorial governments; workers and communities; and leaders across the various sectors of our economy.

(c) Prioritizing Actions. To the extent permitted by law, Task Force members shall prioritize action on climate change in their policy-making and budget processes, in their contracting and procurement, and in their engagement with State, local, Tribal, and territorial governments; workers and communities; and leaders across all the sectors of our economy.

#### **USE OF THE FEDERAL GOVERNMENT'S BUYING POWER AND REAL PROPERTY AND ASSET MANAGEMENT**

**Sec. 204. *Policy.*** It is the policy of my Administration to lead the Nation's effort to combat the climate crisis by example—specifically, by aligning the management of Federal procurement and real property, public lands and waters, and financial programs to support robust climate action. By providing an immediate, clear, and stable source of product demand, increased transparency and data, and robust standards for the market, my Administration will help to catalyze private sector investment into, and



accelerate the advancement of America's industrial capacity to supply, domestic clean energy, buildings, vehicles, and other necessary products and materials.

**Sec. 205. *Federal Clean Electricity and Vehicle Procurement Strategy.*** (a) The Chair of the Council on Environmental Quality, the Administrator of General Services, and the Director of the Office of Management and Budget, in coordination with the Secretary of Commerce, the Secretary of Labor, the Secretary of Energy, and the heads of other relevant agencies, shall assist the National Climate Advisor, through the Task Force established in section 203 of this order, in developing a comprehensive plan to create good jobs and stimulate clean energy industries by revitalizing the Federal Government's sustainability efforts.

(b) The plan shall aim to use, as appropriate and consistent with applicable law, all available procurement authorities to achieve or facilitate:

(i) a carbon pollution-free electricity sector no later than 2035; and

(ii) clean and zero-emission vehicles for Federal, State, local, and Tribal government fleets, including vehicles of the United States Postal Service.

(c) If necessary, the plan shall recommend any additional legislation needed to accomplish these objectives.

(d) The plan shall also aim to ensure that the United States retains the union jobs integral to and involved in running and maintaining clean and zero-emission fleets, while spurring the creation of union jobs in the manufacture of those new vehicles. The plan shall be submitted to the Task Force within 90 days of the date of this order.

**Sec. 206. *Procurement Standards.*** Consistent with the Executive Order of January 25, 2021, entitled, "Ensuring the Future Is Made in All of America by All of America's Workers," agencies shall adhere to the requirements of the Made in America Laws in making clean energy, energy efficiency, and clean energy procurement decisions. Agencies shall, consistent with applicable law, apply and enforce the Davis-Bacon Act and prevailing wage and benefit requirements. The Secretary of Labor shall take steps to update prevailing wage requirements. The Chair of the Council on Environmental Quality shall consider additional administrative steps and guidance to assist the Federal Acquisition Regulatory Council in developing regulatory amendments to promote increased contractor attention on reduced carbon emission and Federal sustainability.

**Sec. 207. *Renewable Energy on Public Lands and in Offshore Waters.*** The Secretary of the Interior shall review siting and permitting processes on public lands and in offshore waters to identify to the Task Force steps that can be taken, consistent with applicable law, to increase renewable energy production on those lands and in those waters, with the goal of doubling offshore wind by 2030 while ensuring robust protection for our lands, waters, and biodiversity and creating good jobs. In conducting this review, the Secretary of the Interior shall consult, as appropriate, with the heads of relevant agencies, including the Secretary of Defense, the Secretary of Agriculture, the Secretary of Commerce, through the Administrator of the National Oceanic and Atmospheric Administration, the Secretary of Energy, the Chair of the Council on Environmental Quality, State and Tribal authorities, project developers, and other interested parties. The Secretary of the Interior shall engage with Tribal authorities regarding the development and management of renewable and conventional energy resources on Tribal lands.

**Sec. 208. *Oil and Natural Gas Development on Public Lands and in Offshore Waters.*** To the extent consistent with applicable law, the Secretary of the Interior shall pause new oil and natural gas leases on public lands or in offshore waters pending completion of a comprehensive review and reconsideration of Federal oil and gas permitting and leasing practices in light of the Secretary of the Interior's broad stewardship responsibilities over the public lands and in offshore waters, including potential climate and



other impacts associated with oil and gas activities on public lands or in offshore waters. The Secretary of the Interior shall complete that review in consultation with the Secretary of Agriculture, the Secretary of Commerce, through the National Oceanic and Atmospheric Administration, and the Secretary of Energy. In conducting this analysis, and to the extent consistent with applicable law, the Secretary of the Interior shall consider whether to adjust royalties associated with coal, oil, and gas resources extracted from public lands and offshore waters, or take other appropriate action, to account for corresponding climate costs.

**Sec. 209. *Fossil Fuel Subsidies.*** The heads of agencies shall identify for the Director of the Office of Management and Budget and the National Climate Advisor any fossil fuel subsidies provided by their respective agencies, and then take steps to ensure that, to the extent consistent with applicable law, Federal funding is not directly subsidizing fossil fuels. The Director of the Office of Management and Budget shall seek, in coordination with the heads of agencies and the National Climate Advisor, to eliminate fossil fuel subsidies from the budget request for Fiscal Year 2022 and thereafter.

**Sec. 210. *Clean Energy in Financial Management.*** The heads of agencies shall identify opportunities for Federal funding to spur innovation, commercialization, and deployment of clean energy technologies and infrastructure for the Director of the Office of Management and Budget and the National Climate Advisor, and then take steps to ensure that, to the extent consistent with applicable law, Federal funding is used to spur innovation, commercialization, and deployment of clean energy technologies and infrastructure. The Director of the Office of Management and Budget, in coordination with agency heads and the National Climate Advisor, shall seek to prioritize such investments in the President's budget request for Fiscal Year 2022 and thereafter.

**Sec. 211. *Climate Action Plans and Data and Information Products to Improve Adaptation and Increase Resilience.*** (a) The head of each agency shall submit a draft action plan to the Task Force and the Federal Chief Sustainability Officer within 120 days of the date of this order that describes steps the agency can take with regard to its facilities and operations to bolster adaptation and increase resilience to the impacts of climate change. Action plans should, among other things, describe the agency's climate vulnerabilities and describe the agency's plan to use the power of procurement to increase the energy and water efficiency of United States Government installations, buildings, and facilities and ensure they are climate-ready. Agencies shall consider the feasibility of using the purchasing power of the Federal Government to drive innovation, and shall seek to increase the Federal Government's resilience against supply chain disruptions. Such disruptions put the Nation's manufacturing sector at risk, as well as consumer access to critical goods and services. Agencies shall make their action plans public, and post them on the agency website, to the extent consistent with applicable law.

(b) Within 30 days of an agency's submission of an action plan, the Federal Chief Sustainability Officer, in coordination with the Director of the Office of Management and Budget, shall review the plan to assess its consistency with the policy set forth in section 204 of this order and the priorities issued by the Office of Management and Budget.

(c) After submitting an initial action plan, the head of each agency shall submit to the Task Force and Federal Chief Sustainability Officer progress reports annually on the status of implementation efforts. Agencies shall make progress reports public and post them on the agency website, to the extent consistent with applicable law. The heads of agencies shall assign their respective agency Chief Sustainability Officer the authority to perform duties relating to implementation of this order within the agency, to the extent consistent with applicable law.

(d) To assist agencies and State, local, Tribal, and territorial governments, communities, and businesses in preparing for and adapting to the impacts of climate change, the Secretary of Commerce, through the Administrator



of the National Oceanic and Atmospheric Administration, the Secretary of Homeland Security, through the Administrator of the Federal Emergency Management Agency, and the Director of the Office of Science and Technology Policy, in coordination with the heads of other agencies, as appropriate, shall provide to the Task Force a report on ways to expand and improve climate forecast capabilities and information products for the public. In addition, the Secretary of the Interior and the Deputy Director for Management of the Office of Management and Budget, in their capacities as the Chair and Vice-Chair of the Federal Geographic Data Committee, shall assess and provide to the Task Force a report on the potential development of a consolidated Federal geographic mapping service that can facilitate public access to climate-related information that will assist Federal, State, local, and Tribal governments in climate planning and resilience activities.

#### **EMPOWERING WORKERS THROUGH REBUILDING OUR INFRASTRUCTURE FOR A SUSTAINABLE ECONOMY**

**Sec. 212. Policy.** This Nation needs millions of construction, manufacturing, engineering, and skilled-trades workers to build a new American infrastructure and clean energy economy. These jobs will create opportunities for young people and for older workers shifting to new professions, and for people from all backgrounds and communities. Such jobs will bring opportunity to communities too often left behind—places that have suffered as a result of economic shifts and places that have suffered the most from persistent pollution, including low-income rural and urban communities, communities of color, and Native communities.

**Sec. 213. Sustainable Infrastructure.** (a) The Chair of the Council on Environmental Quality and the Director of the Office of Management and Budget shall take steps, consistent with applicable law, to ensure that Federal infrastructure investment reduces climate pollution, and to require that Federal permitting decisions consider the effects of greenhouse gas emissions and climate change. In addition, they shall review, and report to the National Climate Advisor on, siting and permitting processes, including those in progress under the auspices of the Federal Permitting Improvement Steering Council, and identify steps that can be taken, consistent with applicable law, to accelerate the deployment of clean energy and transmission projects in an environmentally stable manner.

(b) Agency heads conducting infrastructure reviews shall, as appropriate, consult from an early stage with State, local, and Tribal officials involved in permitting or authorizing proposed infrastructure projects to develop efficient timelines for decision-making that are appropriate given the complexities of proposed projects.

#### **EMPOWERING WORKERS BY ADVANCING CONSERVATION, AGRICULTURE, AND REFORESTATION**

**Sec. 214. Policy.** It is the policy of my Administration to put a new generation of Americans to work conserving our public lands and waters. The Federal Government must protect America's natural treasures, increase reforestation, improve access to recreation, and increase resilience to wildfires and storms, while creating well-paying union jobs for more Americans, including more opportunities for women and people of color in occupations where they are underrepresented. America's farmers, ranchers, and forest landowners have an important role to play in combating the climate crisis and reducing greenhouse gas emissions, by sequestering carbon in soils, grasses, trees, and other vegetation and sourcing sustainable bioproducts and fuels. Coastal communities have an essential role to play in mitigating climate change and strengthening resilience by protecting and restoring coastal ecosystems, such as wetlands, seagrasses, coral and oyster reefs, and mangrove and kelp forests, to protect vulnerable coastlines, sequester carbon, and support biodiversity and fisheries.

**Sec. 215. Civilian Climate Corps.** In furtherance of the policy set forth in section 214 of this order, the Secretary of the Interior, in collaboration with the Secretary of Agriculture and the heads of other relevant agencies,



shall submit a strategy to the Task Force within 90 days of the date of this order for creating a Civilian Climate Corps Initiative, within existing appropriations, to mobilize the next generation of conservation and resilience workers and maximize the creation of accessible training opportunities and good jobs. The initiative shall aim to conserve and restore public lands and waters, bolster community resilience, increase reforestation, increase carbon sequestration in the agricultural sector, protect biodiversity, improve access to recreation, and address the changing climate.

**Sec. 216. *Conserving Our Nation's Lands and Waters.*** (a) The Secretary of the Interior, in consultation with the Secretary of Agriculture, the Secretary of Commerce, the Chair of the Council on Environmental Quality, and the heads of other relevant agencies, shall submit a report to the Task Force within 90 days of the date of this order recommending steps that the United States should take, working with State, local, Tribal, and territorial governments, agricultural and forest landowners, fishermen, and other key stakeholders, to achieve the goal of conserving at least 30 percent of our lands and waters by 2030.

(i) The Secretary of the Interior, the Secretary of Agriculture, the Secretary of Commerce, through the Administrator of the National Oceanic and Atmospheric Administration, and the Chair of the Council on Environmental Quality shall, as appropriate, solicit input from State, local, Tribal, and territorial officials, agricultural and forest landowners, fishermen, and other key stakeholders in identifying strategies that will encourage broad participation in the goal of conserving 30 percent of our lands and waters by 2030.

(ii) The report shall propose guidelines for determining whether lands and waters qualify for conservation, and it also shall establish mechanisms to measure progress toward the 30-percent goal. The Secretary of the Interior shall subsequently submit annual reports to the Task Force to monitor progress.

(b) The Secretary of Agriculture shall:

(i) initiate efforts in the first 60 days from the date of this order to collect input from Tribes, farmers, ranchers, forest owners, conservation groups, firefighters, and other stakeholders on how to best use Department of Agriculture programs, funding and financing capacities, and other authorities, and how to encourage the voluntary adoption of climate-smart agricultural and forestry practices that decrease wildfire risk fueled by climate change and result in additional, measurable, and verifiable carbon reductions and sequestration and that source sustainable bioproducts and fuels; and

(ii) submit to the Task Force within 90 days of the date of this order a report making recommendations for an agricultural and forestry climate strategy.

(c) The Secretary of Commerce, through the Administrator of the National Oceanic and Atmospheric Administration, shall initiate efforts in the first 60 days from the date of this order to collect input from fishermen, regional ocean councils, fishery management councils, scientists, and other stakeholders on how to make fisheries and protected resources more resilient to climate change, including changes in management and conservation measures, and improvements in science, monitoring, and cooperative research.

#### **EMPOWERING WORKERS THROUGH REVITALIZING ENERGY COMMUNITIES**

**Sec. 217. *Policy.*** It is the policy of my Administration to improve air and water quality and to create well-paying union jobs and more opportunities for women and people of color in hard-hit communities, including rural communities, while reducing methane emissions, oil and brine leaks, and other environmental harms from tens of thousands of former mining and well sites. Mining and power plant workers drove the industrial revolution and the economic growth that followed, and have been essential to the growth of the United States. As the Nation shifts to a clean energy economy,



Federal leadership is essential to foster economic revitalization of and investment in these communities, ensure the creation of good jobs that provide a choice to join a union, and secure the benefits that have been earned by workers.

Such work should include projects that reduce emissions of toxic substances and greenhouse gases from existing and abandoned infrastructure and that prevent environmental damage that harms communities and poses a risk to public health and safety. Plugging leaks in oil and gas wells and reclaiming abandoned mine land can create well-paying union jobs in coal, oil, and gas communities while restoring natural assets, revitalizing recreation economies, and curbing methane emissions. In addition, such work should include efforts to turn properties idled in these communities, such as brownfields, into new hubs for the growth of our economy. Federal agencies should therefore coordinate investments and other efforts to assist coal, oil and gas, and power plant communities, and achieve substantial reductions of methane emissions from the oil and gas sector as quickly as possible.

**Sec. 218. *Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization.*** There is hereby established an Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization (Interagency Working Group). The National Climate Advisor and the Assistant to the President for Economic Policy shall serve as Co-Chairs of the Interagency Working Group.

(a) Membership. The Interagency Working Group shall consist of the following additional members:

- (i) the Secretary of the Treasury;
- (ii) the Secretary of the Interior;
- (iii) the Secretary of Agriculture;
- (iv) the Secretary of Commerce;
- (v) the Secretary of Labor;
- (vi) the Secretary of Health and Human Services;
- (vii) the Secretary of Transportation;
- (viii) the Secretary of Energy;
- (ix) the Secretary of Education;
- (x) the Administrator of the Environmental Protection Agency;
- (xi) the Director of the Office of Management and Budget;
- (xii) the Assistant to the President for Domestic Policy and Director of the Domestic Policy Council; and
- (xiii) the Federal Co-Chair of the Appalachian Regional Commission.

(b) Mission and Work.

(i) The Interagency Working Group shall coordinate the identification and delivery of Federal resources to revitalize the economies of coal, oil and gas, and power plant communities; develop strategies to implement the policy set forth in section 217 of this order and for economic and social recovery; assess opportunities to ensure benefits and protections for coal and power plant workers; and submit reports to the National Climate Advisor and the Assistant to the President for Economic Policy on a regular basis on the progress of the revitalization effort.

(ii) As part of this effort, within 60 days of the date of this order, the Interagency Working Group shall submit a report to the President describing all mechanisms, consistent with applicable law, to prioritize grantmaking, Federal loan programs, technical assistance, financing, procurement, or other existing programs to support and revitalize the economies of coal and power plant communities, and providing recommendations for action consistent with the goals of the Interagency Working Group.



(c) Consultation. Consistent with the objectives set out in this order and in accordance with applicable law, the Interagency Working Group shall seek the views of State, local, and Tribal officials; unions; environmental justice organizations; community groups; and other persons it identifies who may have perspectives on the mission of the Interagency Working Group.

(d) Administration. The Interagency Working Group shall be housed within the Department of Energy. The Chairs shall convene regular meetings of the Interagency Working Group, determine its agenda, and direct its work. The Secretary of Energy, in consultation with the Chairs, shall designate an Executive Director of the Interagency Working Group, who shall coordinate the work of the Interagency Working Group and head any staff assigned to the Interagency Working Group.

(e) Officers. To facilitate the work of the Interagency Working Group, the head of each agency listed in subsection (a) of this section shall assign a designated official within the agency the authority to represent the agency on the Interagency Working Group and perform such other duties relating to the implementation of this order within the agency as the head of the agency deems appropriate.

#### **SECURING ENVIRONMENTAL JUSTICE AND SPURRING ECONOMIC OPPORTUNITY**

**Sec. 219. Policy.** To secure an equitable economic future, the United States must ensure that environmental and economic justice are key considerations in how we govern. That means investing and building a clean energy economy that creates well-paying union jobs, turning disadvantaged communities—historically marginalized and overburdened—into healthy, thriving communities, and undertaking robust actions to mitigate climate change while preparing for the impacts of climate change across rural, urban, and Tribal areas. Agencies shall make achieving environmental justice part of their missions by developing programs, policies, and activities to address the disproportionately high and adverse human health, environmental, climate-related and other cumulative impacts on disadvantaged communities, as well as the accompanying economic challenges of such impacts. It is therefore the policy of my Administration to secure environmental justice and spur economic opportunity for disadvantaged communities that have been historically marginalized and overburdened by pollution and underinvestment in housing, transportation, water and wastewater infrastructure, and health care.

**Sec. 220. White House Environmental Justice Interagency Council.** (a) Section 1–102 of Executive Order 12898 of February 11, 1994 (Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations), is hereby amended to read as follows:

“(a) There is hereby created within the Executive Office of the President a White House Environmental Justice Interagency Council (Interagency Council). The Chair of the Council on Environmental Quality shall serve as Chair of the Interagency Council.

“(b) Membership. The Interagency Council shall consist of the following additional members:

- (i) the Secretary of Defense;
- (ii) the Attorney General;
- (iii) the Secretary of the Interior;
- (iv) the Secretary of Agriculture;
- (v) the Secretary of Commerce;
- (vi) the Secretary of Labor;
- (vii) the Secretary of Health and Human Services;
- (viii) the Secretary of Housing and Urban Development;



- (ix) the Secretary of Transportation;
- (x) the Secretary of Energy;
- (xi) the Chair of the Council of Economic Advisers;
- (xii) the Administrator of the Environmental Protection Agency;
- (xiii) the Director of the Office of Management and Budget;
- (xiv) the Executive Director of the Federal Permitting Improvement Steering Council;
- (xv) the Director of the Office of Science and Technology Policy;
- (xvi) the National Climate Advisor;
- (xvii) the Assistant to the President for Domestic Policy; and
- (xviii) the Assistant to the President for Economic Policy.

“(c) At the direction of the Chair, the Interagency Council may establish subgroups consisting exclusively of Interagency Council members or their designees under this section, as appropriate.

“(d) Mission and Work. The Interagency Council shall develop a strategy to address current and historic environmental injustice by consulting with the White House Environmental Justice Advisory Council and with local environmental justice leaders. The Interagency Council shall also develop clear performance metrics to ensure accountability, and publish an annual public performance scorecard on its implementation.

“(e) Administration. The Office of Administration within the Executive Office of the President shall provide funding and administrative support for the Interagency Council, to the extent permitted by law and within existing appropriations. To the extent permitted by law, including the Economy Act (31 U.S.C. 1535), and subject to the availability of appropriations, the Department of Labor, the Department of Transportation, and the Environmental Protection Agency shall provide administrative support as necessary.

“(f) Meetings and Staff. The Chair shall convene regular meetings of the Council, determine its agenda, and direct its work. The Chair shall designate an Executive Director of the Council, who shall coordinate the work of the Interagency Council and head any staff assigned to the Council.

“(g) Officers. To facilitate the work of the Interagency Council, the head of each agency listed in subsection (b) shall assign a designated official within the agency to be an Environmental Justice Officer, with the authority to represent the agency on the Interagency Council and perform such other duties relating to the implementation of this order within the agency as the head of the agency deems appropriate.”

(b) The Interagency Council shall, within 120 days of the date of this order, submit to the President, through the National Climate Advisor, a set of recommendations for further updating Executive Order 12898.

**Sec. 221.** *White House Environmental Justice Advisory Council.* There is hereby established, within the Environmental Protection Agency, the White House Environmental Justice Advisory Council (Advisory Council), which shall advise the Interagency Council and the Chair of the Council on Environmental Quality.

(a) Membership. Members shall be appointed by the President, shall be drawn from across the political spectrum, and may include those with knowledge about or experience in environmental justice, climate change, disaster preparedness, racial inequity, or any other area determined by the President to be of value to the Advisory Council.

(b) Mission and Work. The Advisory Council shall be solely advisory. It shall provide recommendations to the White House Environmental Justice Interagency Council established in section 220 of this order on how to increase the Federal Government’s efforts to address current and historic environmental injustice, including recommendations for updating Executive Order 12898.



(c) Administration. The Environmental Protection Agency shall provide funding and administrative support for the Advisory Council to the extent permitted by law and within existing appropriations. Members of the Advisory Council shall serve without either compensation or reimbursement of expenses.

(d) Federal Advisory Committee Act. Insofar as the Federal Advisory Committee Act, as amended (5 U.S.C. App.), may apply to the Advisory Council, any functions of the President under the Act, except for those in section 6 of the Act, shall be performed by the Administrator of the Environmental Protection Agency in accordance with the guidelines that have been issued by the Administrator of General Services.

**Sec. 222. *Agency Responsibilities.*** In furtherance of the policy set forth in section 219:

(a) The Chair of the Council on Environmental Quality shall, within 6 months of the date of this order, create a geospatial Climate and Economic Justice Screening Tool and shall annually publish interactive maps highlighting disadvantaged communities.

(b) The Administrator of the Environmental Protection Agency shall, within existing appropriations and consistent with applicable law:

(i) strengthen enforcement of environmental violations with disproportionate impact on underserved communities through the Office of Enforcement and Compliance Assurance; and

(ii) create a community notification program to monitor and provide real-time data to the public on current environmental pollution, including emissions, criteria pollutants, and toxins, in frontline and fenceline communities—places with the most significant exposure to such pollution.

(c) The Attorney General shall, within existing appropriations and consistent with applicable law:

(i) consider renaming the Environment and Natural Resources Division the Environmental Justice and Natural Resources Division;

(ii) direct that division to coordinate with the Administrator of the Environmental Protection Agency, through the Office of Enforcement and Compliance Assurance, as well as with other client agencies as appropriate, to develop a comprehensive environmental justice enforcement strategy, which shall seek to provide timely remedies for systemic environmental violations and contaminations, and injury to natural resources; and

(iii) ensure comprehensive attention to environmental justice throughout the Department of Justice, including by considering creating an Office of Environmental Justice within the Department to coordinate environmental justice activities among Department of Justice components and United States Attorneys' Offices nationwide.

(d) The Secretary of Health and Human Services shall, consistent with applicable law and within existing appropriations:

(i) establish an Office of Climate Change and Health Equity to address the impact of climate change on the health of the American people; and

(ii) establish an Interagency Working Group to Decrease Risk of Climate Change to Children, the Elderly, People with Disabilities, and the Vulnerable as well as a biennial Health Care System Readiness Advisory Council, both of which shall report their progress and findings regularly to the Task Force.

(e) The Director of the Office of Science and Technology Policy shall, in consultation with the National Climate Advisor, within existing appropriations, and within 100 days of the date of this order, publish a report identifying the climate strategies and technologies that will result in the most air and water quality improvements, which shall be made public to the maximum extent possible and published on the Office's website.

**Sec. 223. *Justice40 Initiative.*** (a) Within 120 days of the date of this order, the Chair of the Council on Environmental Quality, the Director of the



Office of Management and Budget, and the National Climate Advisor, in consultation with the Advisory Council, shall jointly publish recommendations on how certain Federal investments might be made toward a goal that 40 percent of the overall benefits flow to disadvantaged communities. The recommendations shall focus on investments in the areas of clean energy and energy efficiency; clean transit; affordable and sustainable housing; training and workforce development; the remediation and reduction of legacy pollution; and the development of critical clean water infrastructure. The recommendations shall reflect existing authorities the agencies may possess for achieving the 40-percent goal as well as recommendations on any legislation needed to achieve the 40-percent goal.

(b) In developing the recommendations, the Chair of the Council on Environmental Quality, the Director of the Office of Management and Budget, and the National Climate Advisor shall consult with affected disadvantaged communities.

(c) Within 60 days of the recommendations described in subsection (a) of this section, agency heads shall identify applicable program investment funds based on the recommendations and consider interim investment guidance to relevant program staff, as appropriate and consistent with applicable law.

(d) By February 2022, the Director of the Office of Management and Budget, in coordination with the Chair of the Council on Environmental Quality, the Administrator of the United States Digital Service, and other relevant agency heads, shall, to the extent consistent with applicable law, publish on a public website an annual Environmental Justice Scorecard detailing agency environmental justice performance measures.

#### **PART III—GENERAL PROVISIONS**

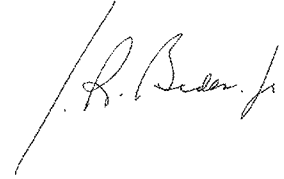
**Sec. 301. General Provisions.** (a) Nothing in this order shall be construed to impair or otherwise affect:

- (i) the authority granted by law to an executive department or agency or the head thereof; or
- (ii) the functions of the Director of the Office of Management and Budget, relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.



(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

A handwritten signature in black ink, appearing to read "D. Trump", is written over a diagonal line that extends from the top right towards the center of the page.

THE WHITE HOUSE,  
*January 27, 2021.*

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# Presidential Documents

Title 3—

The President

Executive Order 14112 of December 6, 2023

## Reforming Federal Funding and Support for Tribal Nations To Better Embrace Our Trust Responsibilities and Promote the Next Era of Tribal Self-Determination

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

**Section 1. Policy.** My Administration is committed to protecting and supporting Tribal sovereignty and self-determination, and to honoring our trust and treaty obligations to Tribal Nations. We recognize the right of Tribal Nations to self-determination, and that Federal support for Tribal self-determination has been the most effective policy for the economic growth of Tribal Nations and the economic well-being of Tribal citizens. Federal policies of past eras, including termination, relocation, and assimilation, collectively represented attacks on Tribal sovereignty and did lasting damage to Tribal communities, Tribal economies, and the institutions of Tribal governance. By contrast, the self-determination policies of the last 50 years—whereby the Federal Government has worked with Tribal Nations to promote and support Tribal self-governance and the growth of Tribal institutions—have revitalized Tribal economies, rebuilt Tribal governments, and begun to heal the relationship between Tribal Nations and the United States.

Despite the progress of the last 50 years, Federal funding and support programs that are the backbone of Federal support for Tribal self-determination are too often administered in ways that leave Tribal Nations unduly burdened and frustrated with bureaucratic processes. The Federal funding that Tribal Nations rely on comes from myriad sources across the Federal Government, often with varying and complex application and reporting processes. While Tribal Nations continue to rebuild, grow, and thrive, some Tribal Nations do not have the capacity and resources they need to access Federal funds—and even for those that do, having to repeatedly navigate Federal processes often unnecessarily drains those resources.

My Administration has taken steps to meaningfully reform existing Federal processes for Tribal Nations. Executive Order 14058 of December 13, 2021 (Transforming Federal Customer Experience and Service Delivery to Rebuild Trust in Government), directed executive departments and agencies (agencies) to reduce administrative burdens and improve efficiency in public-facing and internal Federal processes, while the Presidential Memorandum of January 26, 2021 (Tribal Consultation and Strengthening Nation-to-Nation Relationships), and the Presidential Memorandum of November 30, 2022 (Uniform Standards for Tribal Consultation), reiterated our commitment to, and established uniform standards for, Tribal consultation. These previous actions have laid an important foundation for the policies and procedures set forth in this order.

Now is the time to build upon this foundation by ushering in the next era of self-determination policies and our unique Nation-to-Nation relationships, during which we will better acknowledge and engage with Tribal Nations as respected and vital self-governing sovereigns. As we continue to support Tribal Nations, we must respect their sovereignty by better ensuring that they are able to make their own decisions about where and how to meet the needs of their communities. No less than for any other sovereign, Tribal self-governance is about the fundamental right of a people to determine their own destiny and to prosper and flourish on their own terms.



This order solidifies my Administration's commitment to this next era of Tribal self-determination policies that are rooted in prioritizing partnerships with Tribal leaders, respect for Tribal sovereignty, trust in Tribal priorities, and dignity for Tribal Nations. In keeping with our trust and treaty obligations to Tribal Nations, and our commitment to advancing Tribal sovereignty, it is the policy of the United States to design and administer Federal funding and support programs for Tribal Nations, consistent with applicable law and to the extent practicable, in a manner that better recognizes and supports Tribal sovereignty and self-determination. To realize this policy, the Federal Government must improve how it approaches the work of administering Tribal programs and supporting Tribal communities.

We must ensure that Federal programs, to the maximum extent possible and practicable under Federal law, provide Tribal Nations with the flexibility to improve economic growth, address the specific needs of their communities, and realize their vision for their future. We must improve our Nation-to-Nation relationships by reducing administrative burdens and by administering funding in a manner that provides Tribal Nations with the greatest possible autonomy to address the specific needs of their people. We must make it easier for Tribal Nations to access the Federal funding and resources for which they are eligible and that they need to help grow their economies and provide their citizens with vital and innovative services. We must promote partnerships with Tribal Nations, recognizing that they bring invaluable expertise on countless matters from how to more effectively meet the needs of their citizens to how to steward their ancestral homelands. We must promote effective consideration of the unique needs of Tribal Nations from the very beginning of our design, update, or review of processes and throughout every step of administering Federal funding and support programs. We must implement laws, policies, and programs in ways that allow Tribal Nations to take ownership of resources and services for their communities. We need to identify any statutory and regulatory changes that are necessary or may be helpful to ensure that Federal funding and support programs effectively address the needs of Tribal Nations, and recommend legislative changes, where appropriate. Finally, we must, through Tribal consultation, continually improve our understanding of the funding and programmatic needs of Tribal Nations. The foregoing is not only good policy, but is also consistent with our commitment to fulfilling the United States' unique trust responsibility to Tribal Nations and the deep respect we have for Tribal Nations.

**Sec. 2. Definitions.** For purposes of this order:

(a) The term "agency" means any authority of the United States that is an "agency" under 44 U.S.C. 3502(1), other than those considered to be independent regulatory agencies, as defined in 44 U.S.C. 3502(5).

(b) The term "Federal funding and support programs for Tribal Nations" includes funding, programs, technical assistance, loans, grants, or other financial support or direct services that the Federal Government provides to Tribal Nations or Indians because of their status as Indians. It also includes actions or programs that do not exclusively serve Tribes, but for which Tribal Nations are eligible along with non-Tribal entities. It does not include programs for which both Indians and non-Indians are eligible.

(c) The terms "Tribes" and "Tribal Nations" mean any Indian tribe, band, nation, or other organized group or community considered an "Indian Tribe" under section 4 of the Indian Self-Determination and Education Assistance Act, 25 U.S.C. 5304.

**Sec. 3. Agency Coordination on Better Supporting Tribal Nations and Identifying Opportunities for Reform.** Agencies shall work with the White House Council on Native American Affairs (WHCNA) to coordinate implementation of this order, share leading practices, and identify potential opportunities for Federal policy reforms that would promote accessible, equitable, and flexible administration of Federal funding and support programs for Tribal



Nations. The WHCNA shall assist agencies in coordinating the Tribal consultations required by section 4 of this order to minimize the burden on Tribal Nations in participating.

**Sec. 4. *Embracing Our Trust Responsibilities by Assessing Unmet Federal Obligations to Support Tribal Nations.*** The Director of the Office of Management and Budget (OMB) and the Assistant to the President and Domestic Policy Advisor (Domestic Policy Advisor) shall lead an effort, in collaboration with WHCNA, to identify chronic shortfalls in Federal funding and support programs for Tribal Nations, and shall submit recommendations to the President describing the additional funding and programming necessary to better live up to the Federal Government's trust responsibilities and help address the needs of all Tribal Nations, as follows:

(a) Within 240 days of the date of this order, the Director of OMB and the Domestic Policy Advisor shall, in consultation with the head of each agency that is a member of WHCNA, and in consultation with Tribal leaders or their designees, develop guidance for assessing the additional funding each agency needs for its existing Federal funding and support programs for Tribal Nations to better live up to the Federal Government's trust responsibilities and help address the needs of all Tribal Nations.

(b) Within 540 days of the date of this order, the head of each agency that is a member of WHCNA shall consult the guidance developed under subsection (a) of this section and submit a report to the Director of OMB and the Domestic Policy Advisor that identifies the funding needed for each agency's existing Federal funding and support programs for Tribal Nations to better live up to the Federal Government's trust responsibilities and help address the needs of Tribal Nations in the agency's areas of responsibility.

(c) The Director of OMB and the Domestic Policy Advisor shall develop, based on the agency reports provided under subsection (b) of this section and in consultation with Tribes and WHCNA, recommendations for the Federal Government to take steps toward better living up to its trust responsibilities and helping address the needs of all Tribal Nations. These recommendations should identify any budgetary, statutory, regulatory, or other changes that may be necessary to ensure that Federal laws, policies, practices, and programs support Tribal Nations more effectively. These recommendations shall be submitted to the President, and shall be considered by agencies and OMB in developing the President's Budget beginning with the next regular President's Budget development cycle.

(d) After submission of the reports and recommendations described in subsections (b) and (c) of this section, the Executive Director of WHCNA shall annually convene appropriate representatives of WHCNA member agencies to share best practices, track progress on implementing the recommendations, and evaluate the need for reassessment of funding.

(e) Following submission of the recommendations described in subsection (c) of this section, WHCNA member agencies shall report annually to the Director of OMB on progress made in response to such recommendations. The Director of OMB shall provide a summary of agencies' progress and any new recommendations to Tribal leaders at the annual White House Tribal Nations Summit.

**Sec. 5. *Agency Actions to Increase the Accessibility, Equity, Flexibility, and Utility of Federal Funding and Support Programs for Tribal Nations.*** Agency heads shall take the following actions to increase the accessibility, equity, flexibility, and utility of Federal funding and support programs for Tribal Nations, while increasing the transparency and efficiency of Federal funding processes to better live up to the Federal Government's trust responsibilities and support Tribal self-determination:

(a) Agencies shall design, revise, provide waivers for, and otherwise administer Federal funding and support programs for Tribal Nations to achieve the following objectives, to the maximum extent practicable and consistent with applicable law:



- (i) promote compacting, contracting, co-management, co-stewardship, and other agreements with Tribal Nations that allow them to partner with the Federal Government to administer Federal programs and services;
  - (ii) identify funding programs that may allow for Tribal set-asides or other similar resource or benefits prioritization measures and, where appropriate, establish Tribal set-asides or prioritization measures that meet the needs of Tribal Nations;
  - (iii) design application and reporting criteria and processes in ways that reduce administrative burdens, including by consolidating and streamlining such criteria and processes within individual agencies;
  - (iv) take into account the unique needs, limited capacity, or significant barriers faced by Tribal Nations by providing reasonable and appropriate exceptions or accommodations where necessary;
  - (v) increase the flexibility of Federal funding for Tribal Nations by removing, where feasible, unnecessary limitations on Tribal spending, including by maximizing the portion of Federal funding that can be used for training, administrative costs, and additional personnel;
  - (vi) improve accessibility by identifying matching or cost-sharing requirements that may unduly reduce the ability of Tribal Nations to access resources and removing those burdens where appropriate;
  - (vii) respect Tribal data sovereignty and recognize the importance of Indigenous Knowledge by, when appropriate and permitted by statute, allowing Tribal Nations to use self-certified data and avoiding the establishment of processes that require Tribal Nations to apply to, or obtain permission from, State or local governments to access Federal funding or to be part of a Federal program;
  - (viii) provide Tribal Nations with the flexibility to apply for Federal funding and support programs through inter-Tribal consortia or other entities while requiring non-Tribal entities that apply for Federal funding on behalf of, or to directly benefit, Tribal Nations to include proof of Tribal consent; and
  - (ix) provide ongoing outreach and technical assistance to Tribal Nations throughout the application and implementation process while continually improving agencies' understanding of Tribal Nations' unique needs through Tribal consultation and meaningful partnerships.
- (b) Agencies, in coordination with OMB and consistent with applicable law, should assess Tribal Nations' access to competitive grant funding by tracking applications from Tribal Nations to competitive grant programs and their funding award success rate.
- (c) Agencies should proactively and systematically identify and address, where possible, any additional undue burdens not discussed in this order that Tribal Nations face in accessing or effectively using Federal funding and support programs for Tribal Nations and their root causes, including those causes that are regulatory, technological, or process-based.
- (d) Agencies' implementation efforts shall appropriately maintain or enhance protections afforded under existing Federal law and policy, including those related to treaty rights and trust obligations, Tribal sovereignty and jurisdiction, civil rights, civil liberties, privacy, confidentiality, Indigenous Knowledge, and information access and security.
- (e) The WHCNA, with support from the Secretary of the Interior as appropriate, shall ensure that Tribal Nations can easily identify in one location all sources of Federal funding and support programs for Tribal Nations, and all agencies that provide such funding shall coordinate with the Secretary of the Interior or the Secretary's designee to compile and regularly update the necessary information to support this resource.
- (f) Agencies shall identify opportunities, as appropriate and consistent with applicable law, to modify their respective regulations, internal and



public-facing guidance, internal budget development processes, and policies to include responsiveness to and support for the needs of Tribal Nations as part of their respective agencies' missions.

(g) Agencies shall issue internal guidance or directives, and provide additional staff training or support, as needed and as appropriate and consistent with applicable law, to promote the implementation of the leading practices identified in this section and their integration into agencies' processes for developing policies and programs.

**Sec. 6. General Provisions.** (a) Nothing in this order shall be construed to impair or otherwise affect:

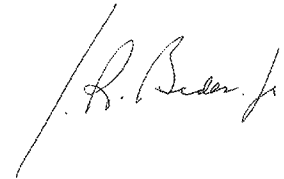
(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) Agencies not covered by section 2(a) of this order, including independent agencies, are strongly encouraged to comply with the provisions of this order.

(d) This order is not intended to, and does not, create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.



THE WHITE HOUSE,  
December 6, 2023.



of public and interagency coordination] are evidence to that fact that the modeling tools employed and results presented are more than adequate for reasonable decision-making.

#### 766-JK-53-EN02

**Comment:** *On a macro-level, because of the timing of the decisions to use the enhanced EFDC, there is reason to believe that political considerations could have been playing greater roles in decisions about modeling choices than they should have. At the time, EPA was facing a court-ordered deadline to set TMDLs in the Savannah River Harbor and they needed a predictive tool. Time was important to EPA and the agencies which had concurrence responsibilities on TMDLs. Also, participation in SEG and SEG-related meetings leads us to believe that USACOE leadership during the time of the models' development might have been more focused on complying with scheduling than scientific accuracy. While it is fiscally responsible to use similar tools for somewhat similar uses when they have been adequately evaluated for all tasks, it can be disastrous when time and politics become greater drivers than science and appropriately applied accurate observation.*

**Response:** Political consideration played no role in the District's decisions regarding modeling choices nor was technical accuracy sacrificed to meet tight scheduling requirements. Details regarding the hydrodynamic and water quality model development process, extensive reviews, and uncertainty analysis can be found in the report, "Development of the Hydrodynamic and Water Quality Models for the Savannah Harbor Expansion Project" [January 2006]; it is included in the Supplemental Materials to the Engineering Appendix. This report includes a discussion detailing the model's accuracy for various parameters [including salinity and dissolved oxygen] throughout the Savannah River estuary [including Middle and Back Rivers]. The hydrodynamic and water quality models employed for SHEP were developed through an iterative process closely coordinated with the SHEP Water Quality Interagency Coordination Team, which followed in the footsteps of the Modeling Technical Review Group that was established in the late 1990s to review the model which would be developed for the deepening project and determine its viability for use with SHEP impact evaluations and mitigation development. The group consisted of technical modelers from the Corps, US EPA Region 4, USGS, Georgia DNR-EPD, South Carolina DHEC, and technical modeling experts [under contract to develop and refine the SHEP model]. The group ultimately decided to adopt a model [originally developed for the TMDL] for evaluating the effects of harbor deepening because it allowed simulation of the harbor's salinity stratification and was state-of-the-art with its 3-dimensional capabilities. After three years of intense work, the original TMDL model was sufficiently enhanced/modified [specifically as regards the calibration of the existing harbor conditions] to receive final acceptance letters from federal, state, and industry reviewers. These letters of acceptance can be found in the Supplemental Materials to the Engineering Appendix (Correspondence Regarding Hydrodynamic & Water Quality Model Acceptability).

#### 766-JK-53-EN03

**Comment:** *On a micro-level, we don't have use of all the knowledge we'd like to have to assess the models. The model calibration report prepared by Tetra Tech, "Development of the Hydrodynamic and Water Quality Models for the Savannah Harbor Expansion Project." is included in the GRR's Engineering Investigations Supplemental Materials via an enclosed CD. The Engineering Investigations Section of the GRR lists four pages of document titles contained within the Supplement, many of which seem much more suited for Ph.D.s in mathematics and physics, and well beyond the general public's ability to discern with only the 60 days allotted to them to comment on the entire and extremely lengthy DEIS and GRR.*



Service recommended preservation as a possible solution and proposed sites that are part of its long-term acquisition strategy to compliment the SNWR. The District also consulted with the Stakeholder Evaluation Group, including its Non-governmental Organizations (NGOs) members, to identify any other suitable mitigation alternatives. Over the ten-year study period, no agency or organization could identify another feasible alternative as mitigation for impacts that would occur as a result of wetland conversion. Therefore, the District proceeded with the identification of preservation sites.

**763-BB-28-EV10, 763-BB-28-EV11**

**Comment:** *"This project will result in a very large volume of spoils that will use significant areas within the exiting spoils disposal sites, located mostly in Jasper County, resulting in shorter life expectancy of the CDF (Contained Disposal Facility). This may result in the need for additional wetland impacts for expansion of the CDF in Jasper County. Additional impacts from existing port expansions, storage, and transportation facilities associated with the port will likely result in additional impacts to wetlands and water quality. The proposed disposal of spoils in the CDF will potentially eliminate the possibility of a new port in Jasper County."*

**Response:** The CDFs bordering Savannah Harbor [including those in South Carolina] are designated to receive sediment dredged from the Savannah Harbor Navigation Project. The environmental impacts associated with using these sites for dredged material disposal were addressed in the Long-Term Management Strategy EIS completed in 1996. Although the US Government does not own these sites in fee, the Corps of Engineers maintains easements to permit deposition of dredged sediments. These diked CDFs have been used for dredged material disposal for many years. Their continued use for disposal is considered the least environmentally damaging option for sediment placement in Savannah Harbor. When the perimeter dikes are raised, the existing CDFs could be used beyond the 50-year project evaluation period. Using the existing CDFs for new work material excavated during harbor deepening would not markedly decrease their useful life or lead to an earlier need to locate any new CDFs.

The Georgia Department of Transportation has requested that the District relinquish its sediment disposal rights for Disposal Areas 14A and 14B, the sites presently being considered for a container terminal in Jasper County. The District is providing technical information to the Joint Project Office to identify a disposal site to replace this lost capacity for Savannah Harbor, as well as a means to replace the existing mitigation features [from previous projects] located within those Areas. The District has advised GA DOT and the Joint Project Office that it would not release the disposal easements until development of a Jasper Container Terminal is imminent, i.e. the developer obtains a Section 404 permit. The JPO's consultant observed that placing new work sediments on Areas 14A and 14B would save the terminal development project over \$200 million by raising its elevation to a workable height. Therefore, if SHEP is constructed, it would benefit the development of a container terminal in Jasper County by significantly reducing its initial construction costs.

**763-BB-28-EV12**



PENNSYLVANIA—OZONE

[8-Hour standard]

Designated area	Designation <sup>a</sup>		Category/classification	
	Date <sup>1</sup>	Type	Date <sup>1</sup>	Type
* * *				
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE:				
Bucks County .....		Nonattainment .....		Subpart 2/Moderate. <sup>3</sup>
Chester County .....		Nonattainment .....		Subpart 2/Moderate. <sup>3</sup>
Delaware County .....		Nonattainment .....		Subpart 2/Moderate. <sup>3</sup>
Montgomery County .....		Nonattainment .....		Subpart 2/Moderate. <sup>3</sup>
Philadelphia County .....		Nonattainment .....		Subpart 2/Moderate. <sup>3</sup>
* * *				

<sup>a</sup> Includes Indian Country located in each county or area, except as otherwise specified.

<sup>1</sup> This date is June 15, 2004, unless otherwise noted.

<sup>2</sup> November 22, 2004.

<sup>3</sup> Attainment date extended to June 15, 2011.

\* \* \*

[FR Doc. 2011-1262 Filed 1-20-11; 8:45 am]

BILLING CODE 6560-50-P

## COUNCIL ON ENVIRONMENTAL QUALITY

40 CFR Parts 1500, 1501, 1502, 1505, 1506, 1507, and 1508

### Final Guidance for Federal Departments and Agencies on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact

**AGENCY:** Council on Environmental Quality.

**ACTION:** Notice of availability.

**SUMMARY:** The Council on Environmental Quality (CEQ) is issuing its final guidance for Federal departments and agencies on the appropriate use of mitigation in Environmental Assessments (EAs) and Environmental Impact Statements (EISs) under the National Environmental Policy Act (NEPA). The guidance was developed to modernize, reinvigorate, and facilitate and increase the transparency of NEPA implementation.

This guidance outlines principles Federal agencies should apply in the development of their NEPA implementing regulations and procedures to guide their consideration of measures to mitigate adverse environmental impacts in EAs and EISs; their commitments to carry out mitigation made in related decision documents, such as the Record of Decision; the implementation of mitigation; and the monitoring of mitigation outcomes during and after implementation. This guidance also

outlines principles agencies should apply to provide for public participation and accountability in the development and implementation of mitigation and monitoring efforts that are described in their NEPA documentation. Mitigation commitments should be explicitly described as ongoing commitments and should specify measurable performance standards and adequate mechanisms for implementation, monitoring, and reporting.

In addition, this guidance affirms the appropriateness of what is traditionally referred to as a “mitigated Finding of No Significant Impact.” Mitigated Findings of No Significant Impact (FONSIs) can result when an agency concludes its NEPA review with an EA that is based on a commitment to mitigate significant environmental impacts, so that a more detailed EIS is not required. As explained in this guidance, an agency does not have to prepare an EIS when the environmental impacts of a proposed action can be mitigated to a level where the agency can make a FONSI determination, provided that the agency or a project applicant commits to carry out the mitigation, and establishes a mechanism for ensuring the mitigation is carried out. When a FONSI depends on successful mitigation, the requisite mitigation commitments should be made public.

**DATES:** The guidance is effective January 21, 2011.

**FOR FURTHER INFORMATION CONTACT:** The Council on Environmental Quality (ATTN: Horst Greczmiel, Associate Director for National Environmental Policy Act Oversight), 722 Jackson Place, NW., Washington, DC 20503. Telephone: (202) 395-5750.

**SUPPLEMENTARY INFORMATION:** This guidance applies to Federal agencies in accordance with sections 1507.2 and

1507.3 of the CEQ Regulations Implementing the Procedural Provisions of the National Environmental Policy Act, 40 CFR Parts 1500–1508. The National Environmental Policy Act (NEPA), 42 U.S.C. 4321–4370, enacted in 1970, is a fundamental tool used to harmonize our environmental, economic, and social aspirations and is a cornerstone of our Nation’s efforts to protect the environment. NEPA recognizes that many Federal activities affect the environment and mandates that Federal agencies consider the environmental impacts of their proposed actions before deciding to adopt proposals and take action. Additionally, NEPA emphasizes public involvement in government actions affecting the environment by requiring that the benefits and risks associated with proposed actions be assessed and publicly disclosed.

The Council on Environmental Quality (CEQ) is charged with overseeing NEPA’s implementation by Federal agencies. CEQ recognizes that NEPA is a visionary and versatile law that can be used effectively to address new environmental challenges facing our nation and also to engage the public widely and effectively. Furthermore, CEQ recognizes that successful NEPA implementation requires agencies to make information accessible to the public to strengthen citizen involvement in government decisionmaking. This guidance is designed to facilitate agency compliance with NEPA, by clarifying the commitments agency decisionmakers may decide to make when complying with NEPA, and ensuring that information about those commitments is accurate and made available to the public.

On February 18, 2010, CEQ announced the issuance of three



proposed draft guidance documents to modernize and reinvigorate NEPA, in conjunction with the 40th anniversary of the statute's enactment.<sup>1</sup> This guidance document is the second of those three to be issued in final form. The first guidance document, on "Establishing, Applying, and Revising Categorical Exclusions Under the National Environmental Policy Act," was released in final form on November 23, 2010.<sup>2</sup> The third guidance document, which addresses when and how Federal agencies should consider greenhouse gas emissions and climate change in their proposed actions, will be the next and last guidance document of this series to be finalized.

In a **Federal Register** notice published on February 23, 2010, CEQ announced the availability of the draft mitigation and monitoring guidance and requested public comments.<sup>3</sup> CEQ appreciates the thoughtful responses it has received on the draft guidance. CEQ received more than sixty comments. Commenters included private citizens, corporations, environmental organizations, trade associations, and federal and state agencies. All of these comments can be viewed online at <http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/comments>. Those comments that suggested editorial revisions or requested clarification of terms are addressed in the text of the final guidance. Those comments that raised policy or substantive concerns have been grouped thematically, summarized, and addressed in the following sections of this Notice.

### Mitigation Planning

Some commenters expressed concern that this guidance would impose an obligation on agencies to develop detailed mitigation plans as a standard part of every EA and EIS process. Several commenters asserted that a detailed mitigation planning stage would needlessly increase complexity and reduce project flexibility. Commenters also suggested that mitigation planning might actually decrease mitigation effectiveness, as the burden created would pressure agencies, as well as applicants, to undertake less comprehensive mitigation.

This guidance provides a flexible template for the development of agency

regulations and procedures allowing continued discretion for agencies to respond to individual project characteristics. Not every EA or EIS will require the development of detailed mitigation plans. Plans should be developed and implemented when mitigation described in an EA serves as the basis for the FONSI (that is, the effects might be significant but for the proposed mitigation). CEQ disagrees that increased attention to mitigation planning in appropriate circumstances will needlessly increase complexity or reduce project flexibility. Rather, the purpose of detailed mitigation planning is to ensure that mitigation plans appropriately reflect project or program characteristics, and careful consideration of a range of options for adequate implementation and monitoring should increase agency flexibility in responding to changing or unforeseen circumstances. CEQ also disagrees that increased attention to mitigation planning would decrease mitigation effectiveness. To the extent that this guidance may prompt agencies to propose actions with lesser adverse environmental impacts allowing for the selection of less comprehensive (or no) mitigation alternatives, such a response would likely indicate that agencies have appropriately structured their proposed actions to avoid and minimize impacts up front to the extent feasible. This is the fundamental goal of NEPA. This would increase rather than decrease the likelihood that mitigation would be effective. Furthermore, CEQ believes that a focus on monitoring will help to ensure the actual effectiveness of proposed mitigation efforts. The guidance has been revised to ensure that agencies focus on establishing monitoring plans for important cases.

### Source of Agency Authority To Make Mitigation Commitments

Several commenters, citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332 (1989), expressed concern that the tone and wording of this guidance reframes NEPA by imposing substantive rather than procedural requirements. Another commenter suggested that if an agency would lack future authority to rectify a substantial mitigation failure, then that lack of authority should be included in the agency's initial analysis of impacts, significance, and mitigation effectiveness.

This guidance is not intended to impose new substantive requirements on agencies or project applicants. Rather, it ensures that the public and decisionmakers are fully informed of any promised mitigation and an agency's clear commitment to perform

or ensure the performance of that mitigation, which in turn strengthens the basis for the NEPA analysis and documentation that an agency has prepared. This guidance is designed to enhance the integrity of the NEPA analysis when it relies on mitigation. It is an agency's underlying authority that provides the basis for the agency to commit to perform or require the performance of particular mitigation. That authority also allows the agency to implement and monitor, or to require the implementation and monitoring of, those mitigation commitments to ensure their effectiveness. It further provides the authority to take remedial steps, so long as there remains federal decisional involvement in a project or other proposed action. The guidance has been revised to further clarify that existing authorities provide the basis for agency commitments to implement mitigation and monitor its success.

NEPA in itself does not compel the selection of a mitigated approach. But where an agency chooses to base the use of less extensive NEPA analysis on mitigation, then this guidance is designed to assist agencies in ensuring the integrity of that decision.

### Use of Outside Experts

Several commenters requested that in recommending the use of third party experts, this guidance should clarify that such experts should be neutral and unbiased parties without conflicts of interest. For example, third party experts participating in development of mitigation and monitoring plans should not have financial stakes in the implementation of the mitigation and monitoring. CEQ agrees with this suggestion but also recognizes that applicants and delegated parties can, in appropriate circumstances, participate in the development and implementation of mitigation and monitoring. The text of this guidance document has been edited to address and incorporate these concerns.

### Effect of Non-Implemented or Ineffective Mitigation

Several commenters asserted that the guidance document was too rigid in providing guidelines for agencies to use when adopting regulations and procedures for responses to mitigation failure. These commenters argued that flexibility should be allowed in response to mitigation failure, with the type of response dependent upon the project's size and scope. Some comments additionally argued that a "NEPA restart" should not be required in response to mitigation failure, and

<sup>1</sup> For more information about this announcement, see <http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa>.

<sup>2</sup> National Environmental Policy Act (NEPA) Final Guidance, Establishing, Revising and Using Categorical Exclusions, 75 FR 75628, Dec. 6, 2010.

<sup>3</sup> Draft Guidance for NEPA Mitigation and Monitoring, 75 FR 8046, Feb. 23, 2010.



that any such requirement lacked legal basis.

Mitigation failure occurs when a previously adopted mitigation commitment has not been implemented or is not as effective as predicted in lessening the significance of the impacts. Where an EA with a mitigated FONSI was predicated on the implementation of the mitigation, failure of that mitigation calls into question the basis for the FONSI because impacts were not reduced to below the level of significance in the manner anticipated. In the case of other EAs and EISs, mitigation failure could similarly indicate mistaken environmental consideration in the original analysis. In any case, this guidance imposes no requirement to restart a NEPA process; rather, it suggests that if there is Federal action remaining, it is appropriate for agencies to consider preparing supplemental NEPA analysis and documentation and to pursue remaining opportunities to address the effects of that remaining action. The agency should also consider whether it is appropriate for future NEPA analyses to consider the mitigation failure in order to ensure that unsupported assumptions about mitigation outcomes are not included in future analyses and documentation. Subsequent environmental baselines must, of course, reflect true conditions, as informed by any past experience with mitigation results. The guidance has been revised to include recommendations that agencies employ adaptive management or assess multiple mitigation alternatives, so that they have already-developed options they can use to address situations where mitigation is not implemented or is not as effective as predicted in the NEPA analysis.

Another commenter felt that the document does not clearly distinguish between the role of mitigation in support of a mitigated FONSI and the role of mitigation in other circumstances. The guidance now discusses mitigated FONSIs and other mitigation commitments in separate sections and the text has been revised to clearly distinguish between those two scenarios.

#### **Clarity With Respect to Mitigation**

One commenter asserted that clarification is needed to understand the exact nature of many mitigation measures. This commenter suggested explicitly amending the guidance document to require unambiguous and exact language in explaining potential and adopted mitigation. Although CEQ cannot mandate exact requirements for every agency or project, CEQ agrees

with this commenter that individual agency regulations and procedures should require mitigation to be clearly described where appropriate and mitigation goals to be carefully specified in terms of measurable performance standards to the greatest extent possible. No change to the guidance has been made in response to this comment.

Other commenters suggested providing additional guidelines to clarify how the principles in the guidance would apply to various types of multi-agency projects, in which lead federal agencies may rely in part on NEPA work done by co-lead or cooperating agencies. CEQ cannot specify how this guidance should apply in every situation. CEQ views the guidance as appropriately clear; each individual agency should, based on existing authority, work to ensure appropriate cooperation with other agencies in the development and implementation of mitigation and monitoring. Specifically, the guidance notes that mitigation and monitoring authority may be shared among joint lead or cooperating agencies “so long as the oversight is clearly described in the NEPA documents or associated decision documents” and “responsible parties, mitigation requirements, and any appropriate enforcement clauses are included in documents such as authorizations, agreements, permits or contracts.” With respect to public engagement, the guidance states that “it is the responsibility of the lead agency to make the results of relevant monitoring available to the public.” No change to the guidance has been made in response to these comments.

#### **Monitoring Mitigation**

One commenter requested that the guidance define “important” in 40 CFR 1505.3, which states that agencies should provide for monitoring in “important cases.” CEQ appreciates this concern. Because of the wide range of situations in which NEPA is applied, it would be difficult to define in advance what cases are “important,” and CEQ has edited the guidance document to note that agencies should apply professional judgment and the rule of reason in determining which cases are “important.”

Other commenters noted that analyzing resource conditions prior to implementation can be useful in providing a baseline for judgments of mitigation effectiveness during the monitoring stage. CEQ agrees and has added language to the guidance incorporating this suggestion.

#### **Public Participation in Mitigation Implementation and Monitoring**

A number of comments addressed the role of the public in mitigation implementation and monitoring. Some commenters felt that allowing the public to directly participate in this process could present safety risks. The guidance states that public participation in mitigation implementation and monitoring should be provided where appropriate. Public involvement will not be appropriate in every situation, and the guidance was left unchanged.

Others felt that the guidance’s discussion of the release of monitoring results could inappropriately encourage the release of confidential information or that the need for public access could be met by relying on citizen requests rather than affirmative reporting by agencies. The guidance does not require that all information be released in every instance, and CEQ believes that agencies will be able to balance their responsibilities to provide opportunities for public participation under the Freedom of Information Act (FOIA), NEPA, CEQ regulations and this guidance with the need to protect confidential information as appropriate. CEQ notes, however, that environmental monitoring results are rarely considered confidential information and are explicitly required to be made available to the public under some environmental statutes. The guidance has been changed to include the need to balance competing privacy or confidentiality concerns with the benefits of public disclosure.

#### **Definition of Significant**

A number of commenters requested that CEQ provide additional guidance on the meaning of “significant” impacts. CEQ has already issued regulations on this, e.g., in 40 CFR 1508.27. No change to the guidance has been made in response to these comments.

#### **Inclusion of Appendix or Examples**

Several commenters suggested supplementing the Appendix with additional examples of agency practices or regulations in addition to the Department of the Army regulations detailed in the proposed guidance. Objections to the example were made based on concerns that the example is focused on actions an agency would directly perform, and that the example is a regulation and thereby implies that mitigation and monitoring must be established through a regulatory process. While CEQ appreciates the suggestions, we believe the Department of the Army regulations detailed in the



proposed guidance provide a clear and useful example and that the addition of other examples is unnecessary. Text introducing the example was added to address the regulatory concern.

### The Final Guidance

For reasons stated in the preamble, above, CEQ issues the following guidance on the Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact. The final guidance is provided here and is available on the National Environmental Policy Act Web site (<http://www.nepa.gov>) at [http://ceq.hss.doe.gov/ceq\\_regulations/guidance.html](http://ceq.hss.doe.gov/ceq_regulations/guidance.html) and on the CEQ Web site at <http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa>.

### Memorandum for Heads of Federal Departments and Agencies

*From:* Nancy H. Sutley, Chair, Council on Environmental Quality.

*Subject:* Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact.

The Council on Environmental Quality (CEQ) is issuing this guidance for Federal departments and agencies on establishing, implementing, and monitoring mitigation commitments identified and analyzed in Environmental Assessments, Environmental Impact Statements, and adopted in the final decision documents. This guidance also clarifies the appropriate use of mitigated "Findings of No Significant Impact" under the National Environmental Policy Act (NEPA). This guidance is issued in accordance with NEPA, 42 U.S.C. 4321 *et seq.*, and the CEQ Regulations for Implementing the Procedural Provisions of NEPA (CEQ Regulations), 40 CFR Parts 1500–1508.<sup>4</sup> The guidance explains the requirements of NEPA and the CEQ Regulations, describes CEQ policies, and recommends procedures for agencies to use to help them comply with the requirements of NEPA and the CEQ Regulations when they establish mitigation planning and implementation procedures.<sup>5</sup>

<sup>4</sup> The Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (CEQ Regulations) are available on <http://www.nepa.gov> at [http://ceq.hss.doe.gov/ceq\\_regulations/regulations.html](http://ceq.hss.doe.gov/ceq_regulations/regulations.html).

<sup>5</sup> CEQ is issuing this guidance as an exercise of its duties and functions under section 204 of the National Environmental Policy Act (NEPA), 42 U.S.C. 4344, and Executive Order No. 11,514, 35 FR 4,247 (Mar. 5, 1970), as amended by Executive

NEPA was enacted to promote efforts that will prevent or eliminate damage to the human environment.<sup>6</sup> Mitigation measures can help to accomplish this goal in several ways. Many Federal agencies and applicants include mitigation measures as integral components of a proposed project's design. Agencies also consider mitigation measures as alternatives when developing Environmental Assessments (EA) and Environmental Impact Statements (EIS). In addition, agencies have increasingly considered mitigation measures in EAs to avoid or lessen potentially significant environmental effects of proposed actions that would otherwise need to be analyzed in an EIS.<sup>7</sup> This use of mitigation may allow the agency to comply with NEPA's procedural requirements by issuing an EA and a Finding of No Significant Impact (FONSI), or "mitigated FONSI," based on the agency's commitment to ensure the mitigation that supports the FONSI is performed, thereby avoiding the need to prepare an EIS.

This guidance addresses mitigation that an agency has committed to implement as part of a project design and mitigation commitments informed by the NEPA review process. As discussed in detail in Section I, below, agencies may commit to mitigation measures considered as alternatives in an EA or EIS so as to achieve an environmentally preferable outcome. Agencies may also commit to mitigation measures to support a mitigated FONSI, so as to complete their review of potentially significant environmental impacts without preparing an EIS. When agencies do not document and, in important cases, monitor mitigation commitments to determine if the mitigation was implemented or

Order No. 11,991, 42 FR 26,927 (May 24, 1977). This guidance is not a rule or regulation, and the recommendations it contains may not apply to a particular situation based upon the individual facts and circumstances. This guidance does not change or substitute for any law, regulation, or other legally binding requirement and is not legally enforceable. The use of language such as "recommend," "may," "should," and "can" is intended to describe CEQ policies and recommendations. The use of mandatory terminology such as "must" and "required" is intended to describe controlling requirements under the terms of NEPA and the CEQ Regulations, but this document does not independently establish legally binding requirements.

<sup>6</sup> 42 U.S.C. 4321 (stating that the purposes of NEPA include promoting efforts which will prevent or eliminate damage to the environment).

<sup>7</sup> This trend was noted in CEQ's Twenty-Fifth Anniversary report on the effectiveness of NEPA implementation. See CEQ, "NEPA: A Study of its Effectiveness After Twenty-Five Years" 20 (1997), available at <http://ceq.hss.doe.gov/nepa/nepa25fn.pdf>.

effective, the use of mitigation may fail to advance NEPA's purpose of ensuring informed and transparent environmental decisionmaking. Failure to document and monitor mitigation may also undermine the integrity of the NEPA review. These concerns and the need for guidance on this subject have long been recognized.<sup>8</sup> While this guidance is designed to address these concerns, CEQ also acknowledges that NEPA itself does not create a general substantive duty on Federal agencies to mitigate adverse environmental effects.<sup>9</sup>

Accordingly, in conjunction with the 40th Anniversary of NEPA, CEQ announced that it would issue this guidance to clarify the appropriateness of mitigated FONSI and the importance of monitoring environmental mitigation commitments.<sup>10</sup> This new guidance affirms CEQ's support for the appropriate use of mitigated FONSI, and accordingly amends and supplements previously issued

<sup>8</sup> See, e.g., CEQ, 1987–1988 Annual Report, available at <http://www.slideshare.net/whitehouse/august-1987-1988-the-eighteenth-annual-report-of-the-council-on-environmental-quality> (stating that CEQ would issue guidance on the propriety of an Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) rather than requiring an Environmental Impact Statement (EIS) when the environmental effects of a proposal are significant but mitigation reduces those impacts to less than significant levels). In 2002, CEQ convened a Task Force on Modernizing NEPA Implementation, which recommended that CEQ issue guidance clarifying the requirements for public involvement, alternatives, and mitigation for actions that warrant longer EAs including those with mitigated FONSI. CEQ NEPA Task Force, "Modernizing NEPA Implementation" 75 (2003), available at <http://ceq.hss.doe.gov/ntf/report/totaldoc.html>. NEPA experts and public stakeholders have expressed broad support for this recommendation, calling for consideration of monitoring and public involvement in the use of mitigated FONSI. CEQ, "The Public and Experts' Review of the National Environmental Policy Act Task Force Report 'Modernizing NEPA Implementation'" 7 (2004), available at [http://ceq.hss.doe.gov/ntf/CEQ\\_Draft\\_Final\\_Roundtable\\_Report.pdf](http://ceq.hss.doe.gov/ntf/CEQ_Draft_Final_Roundtable_Report.pdf); see also CEQ, "Rocky Mountain Roundtable Report" 8 (2004), available at <http://ceq.hss.doe.gov/ntf/RockyMtnRoundTableReport.pdf> (noting that participants in a regional roundtable on NEPA modernization identified "developing a means to enforce agency commitments to monitoring and mitigation" as one of the top five aspects of NEPA implementation needing immediate attention); "Eastern Round Table Report" 4 (2003), available at <http://ceq.hss.doe.gov/ntf/EasternRoundTableReport.pdf> (reporting that, according to several panelists at a regional roundtable, "parties responsible for monitoring the effects of \* \* \* mitigation measures are rarely identified or easily held accountable," and that a lack of monitoring impedes agencies' ability to address the cumulative effects of EA actions).

<sup>9</sup> *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989).

<sup>10</sup> CEQ, "New Proposed NEPA Guidance and Steps to Modernize and Reinvigorate NEPA" (Feb. 18, 2010), available at <http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa>.